

Digitized by the Internet Archive
in 2017 with funding from
CLIR

R. Holmes

1959 - 1964

Species Accounts – Part 2

Calidris fuscicollis – *Calidris melanotos*

R. Holmes

1959 - 1964

Species Accounts – Part 2

Calidris fuscicollis – *Calidris melanotos*

Holmes, R.
1959

Erolia fuscirostris

15 June Barrow, Alaska

One seen flying swiftly across the dune area at 1400. It was flying westward and as it passed, it uttered a very different sounding call. This consisted of a twinkling-like note which is different from the flight notes of the other local sandpipers.

19 June Barrow, Alaska

One pair seen along the ^{beach} ridge just ~~west~~ of the gas line. Several times they were noted chasing and the note described above was used. Later the pair landed about 10-12 feet away and the female started walking. The male ^{immediately} spread out his wings horizontally and with the tips drooping, lowered his head and cocked his tail. He then followed behind the ♀ in this position ^{with wobbling up and down} for about 6 feet. This whole display was accompanied by a "single" note which was repeated 8 to 10 times. It can best be described as a boing-boing... (like a spring popping). At the end of the 6 feet the male began to chase the female and they both took flight and flew out over central ^(Meadow Lake) marsh. Just before

General Principles

The first principle is that the law is a system of rules which are applied to the facts of a case. The second principle is that the law is a system of rules which are applied to the facts of a case. The third principle is that the law is a system of rules which are applied to the facts of a case. The fourth principle is that the law is a system of rules which are applied to the facts of a case. The fifth principle is that the law is a system of rules which are applied to the facts of a case. The sixth principle is that the law is a system of rules which are applied to the facts of a case. The seventh principle is that the law is a system of rules which are applied to the facts of a case. The eighth principle is that the law is a system of rules which are applied to the facts of a case. The ninth principle is that the law is a system of rules which are applied to the facts of a case. The tenth principle is that the law is a system of rules which are applied to the facts of a case.

Holmes, R.
1959

Erolia fuscicollis

2.

19 June Barrow, Alaska

They flew, the ♂ lost regains his normal posture and bobbed his head several times. No sound was heard at this time.

1500.-1600. This pair was seen again in the same general area. The courtship display described above was seen once again, but it was at such a distance that nothing new can be added. The aerial display was performed several times.

It was a typical erolia-type display where the bird flew to a height of about 30 feet and then glided down giving a high pitched twittering-note. This note was a three^(or 2)-part tinkling note which is very distinctive and seems to be the highest pitched of any of the Erolia's.

20 June Barrow, Alaska

The same birds as mentioned above were watched for an hour and a half (0930-1100) on the beach ridge. The male was showing his territoriality by making the rounds of approx. 10 acres on top of the ridge. He would sit on mounds at various locations

Holmes, R.
1959

Erolia fuscicollis

3.

20 June Barrow, Alaska

around the area and occasionally display (airial). Also if a Pectoral, Red-backed, Semi-palmated or Baird Sandpiper would come into the area they were chased out immediately. By noting where these chases started, the boundaries of the territory could be roughly determined. It seemed to be about the width of the ridge and extended from 30 yards west of the row of poles west to within 50 yards of the gas line. The boundaries seemed fairly definite, and the only time the bird was seen to leave the area was when he flew to the SE to a patch of tundra near meadow lake. It soon returned and resumed ^{its} defensive ^{behavior}. It would leave its post and fly low over the ground (3-7 feet) and then rise to a height of 40 or 50 feet. From this height it would float for several feet on horizontal wings and then as it approached the ground, the wings would be held in a V-fashion and the bird would land in this position.

Holmes, R.
1959

Erolia fuscirostris

4.

20 June Barrow Alaska

The song given during this aerial display is somewhat varied. It usually consists of a double-burled note which may be given in rapid succession (up to as many as 10-12 times) or it may be interspersed with a type of "boing" note which was described earlier. This note during the flight display is different however, in that it seems to be carried out longer and can be interpreted as a type of trill. It could be characterized as a boing-g-g-g-zee note which is drawn out. These notes may be given on the ground as well as in the air. Several times when he flew to these heights he merely hovered instead of gliding down, ^{using shallow wing beats.} In one case he remained aloft for 2½-3 minutes and another time it was at least 2 minutes. No vocal movement could be heard during this hovering, but occasionally, he would glide for 4 or 5 feet at which time, he would give the song described above, and then begin hovering again. Once the ♂ was seen next to the female and the previous

Holmes, R.
1959

Erolia fusciollis

5.

20 June Barrow, Alaska

"courtship" display was seen. According to F.A.P., the note used here was the same as the one used during the aerial display. After the display was performed twice, the male appeared to sneak off using the "mouse-run" technique, when he moved about 10 feet away from the female before taking flight. The male was also seen to give this same display for a Semipalmated Sandpiper, which was followed by a chase which ended at the territory boundary. So apparently this may be an aggressive behavior as well as (?) a courtship display. Later, two males were displaying at the same time. Conflict between these two was not observed, even though the second bird was seen inside the first one's territory (near the eastern end). During the flight song, the male's throat could be seen moving in and out, but it was not bulged out like the Pectoral. There was no defensive action taken when Red Phalaropes or Longspurs flew over the area. The wing display, where one wing is raised forward, an intruder was noted when a Golden

Holmes, R.
1959

6.

Erolia fuscicollis

20 June Barrow, Alaska

Plow Hicover. Also when I approached close, he would raise the one wing (usually the one near the intruder).

21 June Barrow, Alaska

A pair seen again on the beach ridge. Aerial displays were noted several times, and the ♂ was seen to chase two Pectoral Sandpipers and a Baird's Sandpiper. The ground display was given once when the female was present. The female was approached one time as she was feeding and when I was within 10 feet of her, she crept off using the "mouse-run" behavior. This behavior is where the bird appears to crouch and runs in this position, as if it was running away undetected. The feathers on the back are ruffled and the head is out straight in front of the bird. This is often the type of behavior a bird uses to leave its nest or when it is going to a nest. The territorial boundaries were carefully guarded again and were patrolled in the same low-flying manner. The second bird was not seen.

Holmes, R.
1959

Erolia fuscicollis

7.

22 June Barrow, Alaska

The male was seen displaying several times and was patrolling the territory regularly. The female or second male was not seen.

23 June Barrow, Alaska

The nest was discovered in the late afternoon just n. of the crest of the ridge in rather dry ground. It was about 40 feet from a small pond and was on a small mound. The nest was "lined" with grass and was covered by rather tall grass. It contained three eggs so egg-laying probably began on or near the 21st. The eggs are greenish-olive with dark brown blotches near the large end. Upon flushing the female from her nest (by following and frightening male), we waited until they settled down and then moved back about 100 feet. The female flew right back and walked around nervously for about a minute. Then she gradually worked her way to her nest and immediately began to sit. When she was again flushed, she stayed about 10 feet (or)

23 June, Barrow, Alaska

8.

away and performed a distraction display. This consisted of spreading her wings slightly and drooping them and drooping and fanning her tail. At the same time a sharp chek, chek note was given which sounded very much like the note of a baby chicken. The male was several yards away and did not attempt a display. Previously, the male was seen to land and then waddle few feet, bobbing his head at the same time. The regular aerial song was given as his head moved forward and back. The high note was given with the bill well open. This motion had the appearance of the bird puffing out its throat; however with the neck pushed out and the head back, the feathers were merely ruffled.

24 June, Barrow, Alaska

The nest was checked at 0940 and contained 4 eggs. The female waited until I was within 6 feet of the nest before she flew off. After flying about 6 feet she landed and performed the distraction display. As I walked away from the nest, she followed for about ten feet then she turned and began to feed nervously. She returned to the nest in about 3 minutes.

26 June, Barrow, Alaska

The nest was checked at 1100, and the female was incubating. During

Holmes, P.
1959

Erolia fuscicollis

9

26 June Barrow, Alaska.

The 45 minutes spent on that part of the ridge, the male was not seen or heard. The wind was blowing, however, and this could have lessened the chance of seeing him.

27 June Barrow, Alaska

When the nest was first visited at 1300, the female was not present. After spending several minutes taking pictures of the nest, the female (I suppose) showed up and gave the distraction display. She would perform this display with wings slightly drooped, tail spread and in a crouched position for a distance of 30 feet from the nest. From that distance out, she would feed nervously, poking at various clumps of grass, etc. When she was close to the nest, the distraction displays were rarely always given (in a few cases after standing near the nest for several seconds, she approached - walking for a few but generally assuming the crouch position. The male was heard to display (aerially once, about 100 yards west of the

27 June. Barrow, Alaska
nest area. He was not seen in contact
or communication with the female.

28 June. Barrow, Alaska

Two birds seen, both displaying
aerially, near the trapline on gasline
ridge. One bird was heard several
times and was on the south side
of the ridge. The second bird was
only seen once and it was on
the north side.

2 July. Barrow, Alaska

NO activity seen or heard among
the nest. Also the birds on gas
line ridge have not been heard
since 28 June.

4 July. Barrow, Alaska

The nest was checked at 1330.
At this time, the nest could not
be found, and there was no sign
of the parent bird. The depression
was located, but no sign of
the eggs was detected. Apparently
some predator (rattler?) may
have taken toll on the nest.

For a more complete description
of the nest the following discussion
will be made. The nest was located

Holmes, R.
1959

Erolia fuscirostris

11.

4 July Barrow, Alaska

about 25 feet below the crest of the beach ridge on the north (NW) side. The ground is rather dry & ^{covered} with small dwarf willow, mosses and lichens with an interspersia of grasses (Poa and others). The position of the nest was among the lichens and willow and grasses and was a shallow depression. There did not appear to be an exact lining to the nest, but it was probably formed from the surrounding grass being pressed down and matted when the adult sat down to lay the eggs. Since the eggs had disappeared, the nest could not be easily distinguished from the surrounding tundra. Pictures were taken of the area to illustrate these points.

11 August Pitt Point, Alaska

One bird seen about 2 mi. so. of the coastline on a low ridge (typical nesting area); however no sign of young birds was presented.

15 August Pitt Point, Alaska

One bird seen near the base. The "trunkle" call note is ^{very} distinctive.

Holmes, R.
1959

Erolia fuscioilis

16 August Pitt Point, Alaska

One noted in the same locale as the one yesterday. It was feeding among a group of small ponds.

19 August Barrow, Alaska

One was seen on Gas line Ridge near the end of trapline I. It was not noted at the next visit.

- 1 caught in traps - feeding?
check trap records

Holmes, R.
1960

Erolia luscicollis

22 June Ikroavik, Alaska

A pair seen near the small lake S. of the 2nd inlet into Ikroavik. The ♂ was seen chasing the ♀ (aerially); both disappeared for a time. Finally after a 15 minute wait I heard the ♂ display. He flew to a height of about 25 feet & gave the pump-you call. It was noted that this call seemed to be more buzzy- or vibrating-like than the characteristic. The bird gave only a sequence of 6-8 notes, & then he returned to the ground. The ♀ was not seen again.

23 June - A chase was seen near the 2nd inlet. Two birds (pr?) were chasing a third indiv north-westward across the slough. The birds were followed with the glasses as far as possible, but they were not seen to stop (the chase was not a straight course; there was much turning & actual chasing). Another(?) bird was seen to fly across the plot near the

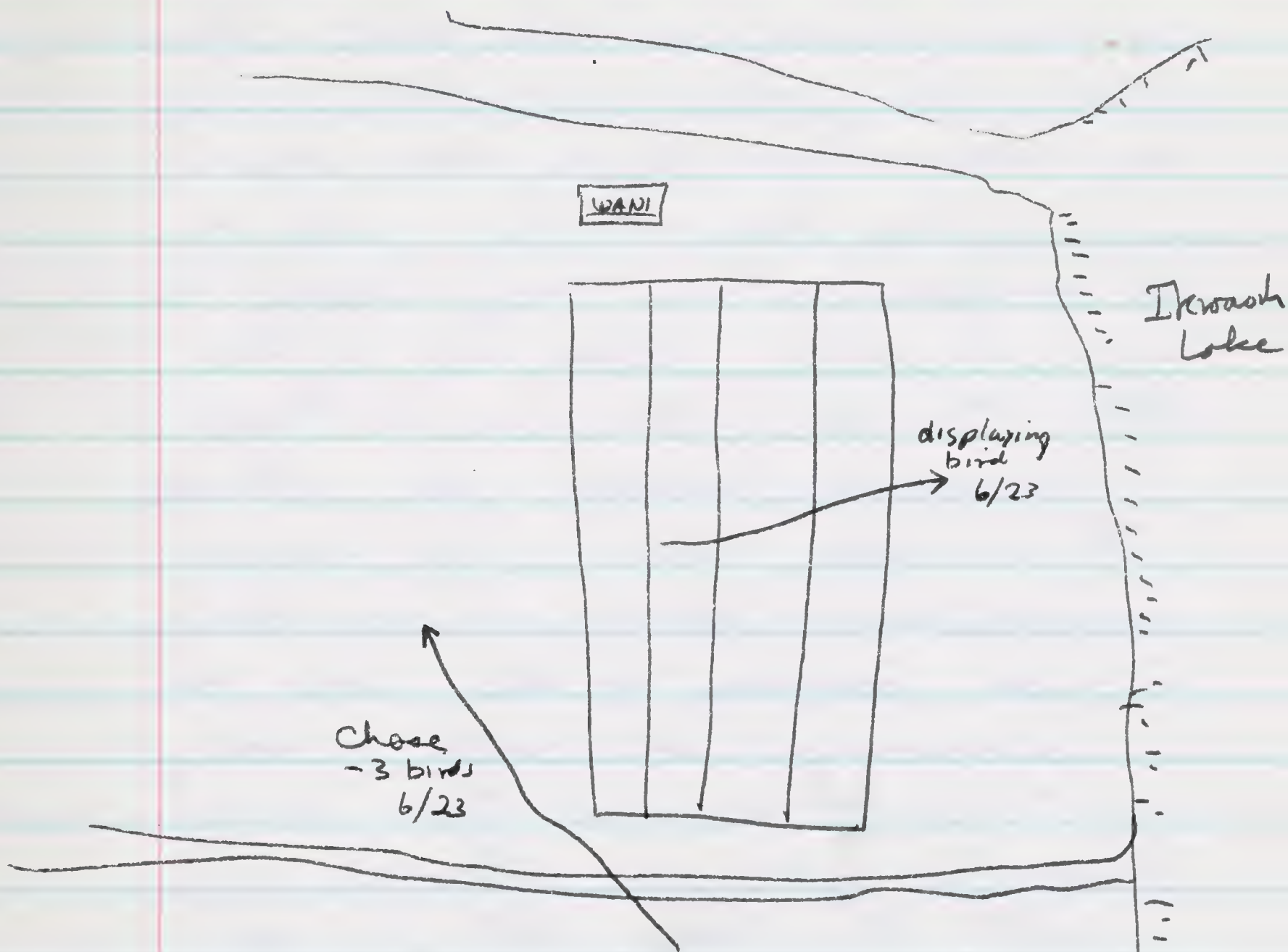
Holmes, R.
1960

Erolia fuscirostris

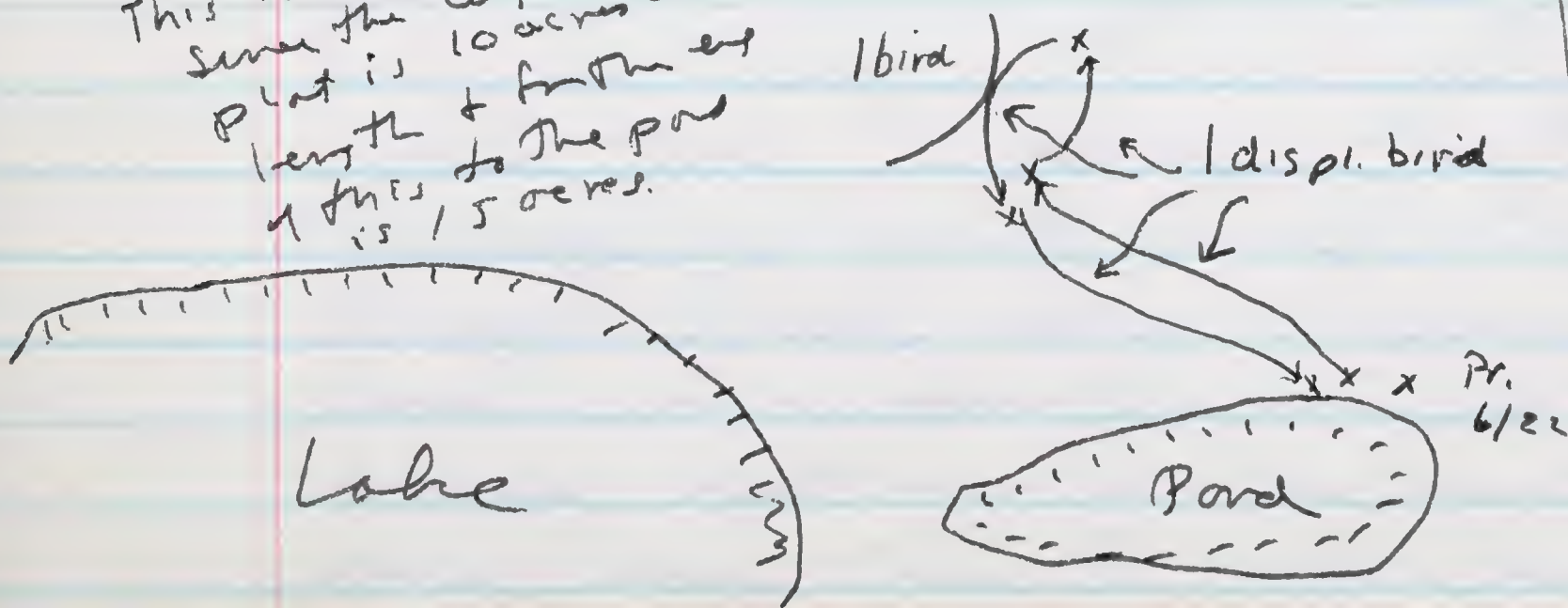
2

23 June Ikroavik, Alaska

half way marsh towards the east.
He displayed as he went. These
records are shown below:



This is out of proportion
since the length of
plot is 10 acres in
length & further east
to the pond
this is 15 acres.



Holmes, R.
1960

Erolia fuscicollis

3

23 June Iktroavik, Alaska

In the evening, a ♂ was watched by the pond. He was feeding along the edge and occasionally would fly 3 or 4 feet to a new feeding place along the shore. Three times he was noted to fly northwesterly into an area of low center polygons where he would just sit on a mound. No activity was noted. Once he rose to meet an on-coming bird. After sitting for several minutes he would fly back toward the lake (pond) & begin feeding again. He was seen to display near the pond & near his "observation" post. It was noted that in the display he rises abruptly (more so than most of the other *Erolia* I have seen) with strong wing beats. He then hovers and gives his aerial song. It was particularly noted this evening that his song is quite weak. Even though I was only 150 yards down wind from the bird I could not hear the "zee" notes, and even then I had a hard

Holmes, R.
1960

Erolia fuscicollis

4.

23 June Iktroavik, Alaska

June hearing the "pings". This bird was watched for about $1\frac{1}{2}$ hours, and the second bird was not seen during this time. One was heard late this evening somewhere down the plot area.

24 June - While doing the census, I heard a white-rump displaying across the second inlet into Iktroavik. It was heard only twice. In the evening, a display was heard near station 19. The birds were not seen near the pond, as they were the last two evenings.

26 June Barrow, Alaska

One heard on the east shore of Salt Lagoon, and one was collected by Pitelka just south of Britton's Area. Another bird was seen out in central marsh near the SW corner of the marsh plot. It was seen feeding with a flock of \rightarrow Pectoral Sandpipers.

27 June - I heard displaying on the bear ridge, just east of the zone line.

Holmes, R.
1960

Erolia fuscicollis

5.

30 June Ikroavik, Alaska

During the evening hours, several white-rumped Sdp. were noted near stakes 22.4-25.4. When first seen, one bird was flying low over the ground. He landed suddenly and kept his wings at a 60° to the ground. His tail was raised but the tail feathers were not spread. He then proceeded to move slowly with a very slight side to side motion. The "pouing-ree" was given during this walk also. I could not ascertain if this was toward a ♀ or not.

Several seconds later, I saw 2 white-rumps chasing a third bird in a zigzag fashion. About one hour later, another chase was observed which again involved three birds. Two appeared to be chasing the third as they flew low over the ground. This chase lasted nearly 5 minutes before the birds disappeared into the fog. About 15 minutes later, a displaying bird was seen + heard near stake 24.5. When this bird glided down after

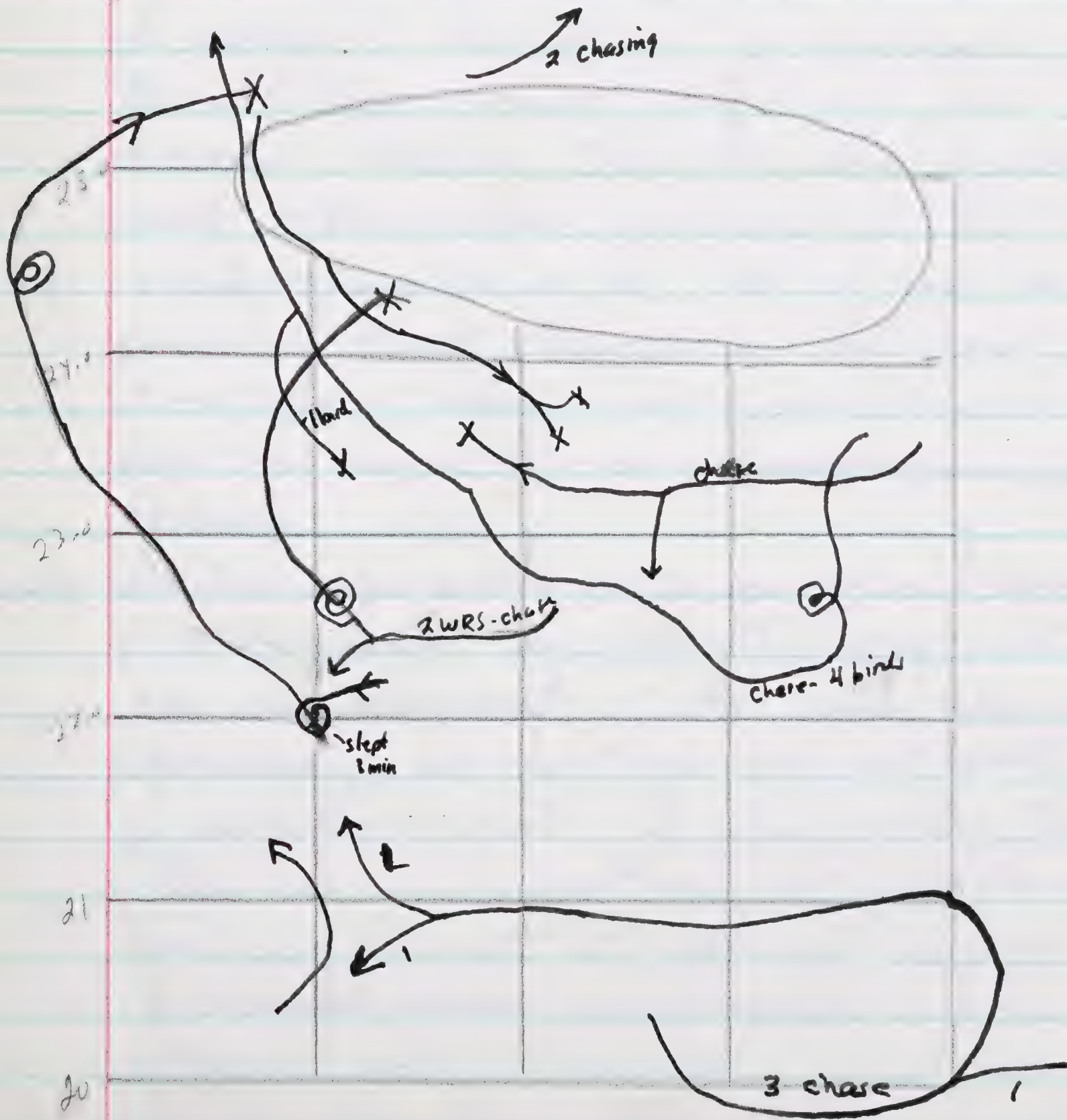
Erolia fuscicollis

6.

30 June Iktroavik, Alaska

her display the wings are held at approximately 45° , and the bird appears to float slowly down to the ground.

1 July - The birds were very active today near the south end of the plot. The following diagram is a summary of the action in this area:



Holmes, R.
1960

Erolia fuscicollis

7.

1 July Iktroavik, Alaska

The map on the previous page shows the activity of the various white-rumps on the census area. The original notes are on the census sheets. I am still not clear as to what was happening today. There seemed to be an exceptional amount of chasing, and it was difficult, if not impossible, to establish territorial boundaries. During these chases, the birds are erratic flyers. They fly close behind each other, weave back and forth, make sharp turns, etc.. It is my impression that there are at least 2 to 3 pair here, but even this is hard to say with any ~~small~~ degree of certainty.

2 July - White-rump activity was again noted near the south end of the plot. At ~~any~~ one moment, 3 ♂♂ were heard displaying, ~~at~~ so there are at least 3 displaying birds. I also believe that this is conservative & that there are at least 5, if not 6 pair. 6 birds were involved in one chase while another bird was heard displaying behind me at

Holmes, R.
1960

8.

Erolia fuscicollis

2 July Iktroavik, Alaska

display

The same time. Often during a chase, one bird (usually the chaser) will display. In one instance, 2 birds were seen flying southward towards the pond and then flew out over it. Once, the chasing bird flew quickly ahead, set his wings at a 45° , and displayed. The other bird kept on going, paying no attention to the displaying bird. The displaying bird then fell into place and continued chasing. This happened twice during a 300 yard flight. When they were over the pond, a third bird joined them in the chase. The three continued south; one of them would display once or twice. Often during the chase, pinging-see was uttered by the chaser (even when he did not set his wings in the typical display pattern). Later, a bird was seen displaying. When he returned to the ground, he ran for a distance of about 2 feet in a hunched over posture (not the usual destruction display with tail spread, etc.) The bird then stood erect on a mound for 30 sec. It

Holmes, R.
1960

Erolia fuscicollis

9.

2 July Ikroavik, Alaska

Then extended his wing forwards a bird (#2) which was standing a few feet away and was walking toward him.

This second bird raised its wing in response to #1 and turned around.

Bird #1 then walked quickly toward #2, raised its tail (not spread, but held in approximately normal position), dropped its wings and then placed them horizontally - as in MS. He then walked behind the female (#2), walking in with a side to side or tottering motion.

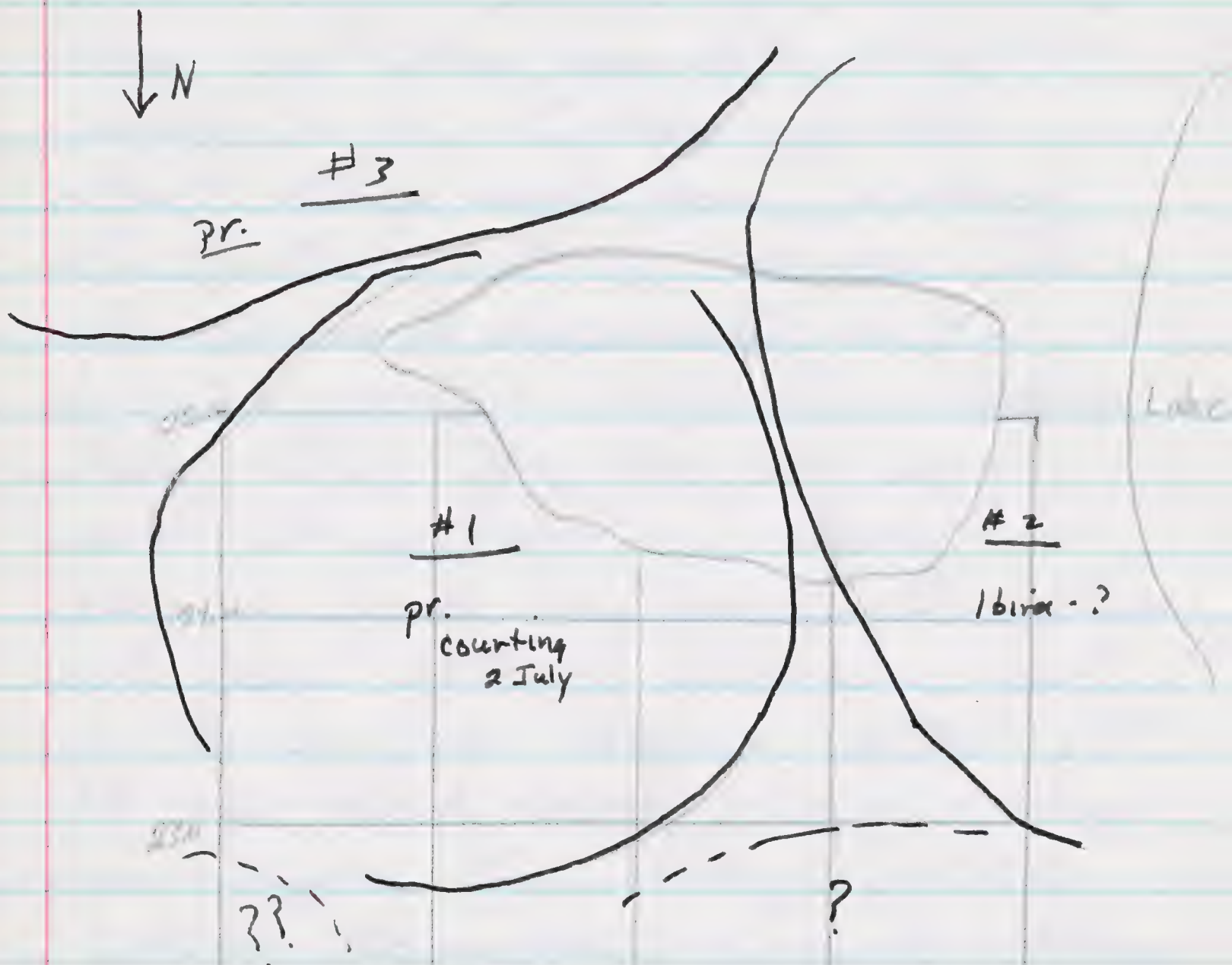
The pong-ree accompanied this performance. After 10 sec while the ♂ was still in this position, a 3rd bird landed nearby + both birds in display raised their wings towards this intruder. A chase then ensued with the ♂ (#1) leading the ♀ (#2), both after the intruder. After several seconds, there were 6 birds involved in the chase, and they all headed southward over the pond. There now appears to be at least 3 pairs in the area + possibly 5. The diagram on the following page shows what I believe

unpublished

Holmes, R.
1960

Erolia fuscicollis

2 July Iktroavik, Alaska
to be the case now. This is subject
to modification.



When display + chasing has quieted, the respective birds can be seen in these areas; however during the above mentioned activities, there is some confusion on the actual boundaries. Much of the chasing seems to be confined to members of the pair. This is similar to the chasing seen

Holmes, R.
1960

11.

Erolia fuscicollis

2 July Iktroavik, Alaska

in alpinia, in that during courtship the ♂ often chases the ♀ for great distances. In fuscicollis where these birds are frequently seen, it seems possible that there may be a strategy of ♀♀, so that other males are after the ♀ that is being courted. This is also confirmed, apparently, on the beach & gas line ridge (see Pikelkin Field Notes). The "pomp-zee" call when it is heard in chase may be given only for the ♀. I have not been able to determine yet, if this is given toward other ♂♂. It is heard during chases, but here again the lack of visible sexual dimorphism prevents obtaining information on this point. Sometimes the aerial display is started with a "zee-zee, pomp zee..." - instead of zee -

Once in the late afternoon, the pair (#1) was seen together. The ♂ was in his ground display position, following behind the ♀. Suddenly he tried to mount her, but she

Rec'd

Holmes, R.
1960

Erolia fuscicollis

12.

2 July Ikroavik, Alaska
turned, lowered her wings + stretched them horizontally + stood facing him. He was still in his display posture + was giving the pointing-see. As she faced him, they were both in the identical position, except that her tail was in its normal position + was not cocked. He then jumped partially over her + turned as he did so, landing on her back. Copulation (?) took place, + several seconds later, the pair flew off. About half an hour, copulation (or at least an attempt) was again seen in the same general locality. The ♂ had just finished his ground display when he tried to mount the ♀. It appears that copulation took place, but this could not be definitely determined.

In the evening very little activity was noted. One bird which had been feeding for 10 minutes raised his wing towards a phalarope which flew over + at the same time gave a 20 second sequence of pointing-see. After the phalarope passed, the

very dark
in 28

Holmes, R.
1960

Erolia fuscicollis

2 July Iktroavik, Alaska

white-rump (♂, I believe. - he had just displayed previous to the feeding period) lowered his wing + after his vocalization returned to his feeding. It has been noted that these birds all do a considerable portion of their feeding around this pond. When 1st coming to the area, the birds can usually be located along the edge of the pond. The same bird which displayed toward the phalarope (above), also was seen to chase a ♂ Pectoral sandpiper + then do an aerial display (at stroke 23.1). About 15 minutes later, both birds (Pect. Sg + the wh. rump) were feeding side by side with no trouble between them. The habitat of fuscicollis here at Iktroavik seems to be quite similar to the section of the beaver ridge where we found them last year. The ridge is not high, but is elevated enough to allow for a gentle slope on the east side which extends down to the shore of the lake. This is a grass-covered

— ۱۰۰ —

Holmes, R.
1960

Erolia fuscicollis

2 July Iktroavik, Alaska

slope which is used by the birds for feeding. On the west side, the ridge slopes more gently into an area of ponds + small lakes.

On the slope there are areas of low polygon and moderate troughs (1-2 feet deep) and a variety of small puddles + ponds. Actually this is the area in which most of the birds spend their time and where most of the chasing + display takes place.

3 July - East Iktroavik, Alaska

One individual seen just north of Long Lake + just east of Iktroavik. The bird was flying low over the tundra + was not displaying.

4 July Iktroavik, Alaska

Severus seen at the south end of the plot. Once a redback was chased.

5 July Barrow, Alaska

None were seen on the broad ridges.

8 July Iktroavik, Alaska

A pair(?) were seen chasing on the northwest portion of the plot. On a portion of the ground display was

Holmes, R.
1960

Erolia fuscicollis

- 8 July Ikerovik, Alaska - also displayed once in flight. seen. The ♂ had raised his tail & spread out his wings, but was then interrupted by a ♂ ptarmigan landing nearby. The or then flew off & several minutes later they were seen flying again in the same direction (so they must have circled around). In the late evening, one was seen feeding near the pond at station 25.1, & another was heard displaying nearby.
- 9 July - Very little activity at the south end of the plot in the evening. 1 heard seen feeding.
- 10 July - 2 birds seen at the south end of the plot. 1 display heard as there 2 chased.
- 14 July - 1 seen along the east edge of the plot near station 23.0. It had been feeding along the edge of Ikerovik & flew back into the plot in this locale. No others were seen or heard; however it was a windy-rainy cold day.
- 17 July - None seen in the area or the plot or in that vicinity. One was

Holmes, R.
1960

Erolia fuscicollis

17 July Ikroavik, Alaska

noted along Voth Slough, just before it empties into Solt Lagoon.

21 July - None seen around Ikroavik & none were heard. The area around the end of the plot was thoroughly checked. Also the area south of the plot was walked for about $\frac{1}{4}$ mile.

26 July - None seen in the white-rump area of the plot or near the shore.

6 August - The area at the south end of the plot was again checked, and there was still no sign of any white-rumped Sandpipers. If the birds did breed successfully, they have disappeared from view. None have been reported recently.

15 Aug - The area was checked again & still no sign of the white rumps.

3 Sept 1 juvenile collected along the lagoon south of Funnaf Lagoon ("Voth Creek"). It was just begun its post juvenile molt.

Holmes, R.
1961

Erolia fuscicollis

4 June Barrow, Alaska

While driving along the old weasel route, south of Button's Area, a Semi-pal scanned up + kept moving along in front of me. Suddenly a second bird appeared next to the Semi-pal + went into a courtship posture. Subseq. both birds were collected (1078 - 1079) + the display turned out to be E. fuscicollis. The display was the same as seen before, that is with the tail raised but not spread. Wings held horizontally + a slight flick. The weasel noise drowned out any sounds which may have been emitted. I presume the Semi-pal flying + landing near the wh-r must have set off this behavior. (The display lasted only 20-30 sec, after which time both birds began to feed - about 6-10 feet apart.

10 June - In the morning, a displaying bird was seen hovering above the tundra at a height of 30' - given the pinging cues. This was in the area of ridge country - No. 1 Troughs IV A+B + V (the area near a drum with a stick protruding out). The ♂ flew down along the ponds - the lowlands where he was through displaying. In the evening, he was heard displaying twice +, he was feeding with a second bird near the ponds - so, he is mated.

Holmes, R.
1961

Erilia fuscescens

13 June Barrow - Ikroavik, Alaska

None seen or heard today in the census plot

15 June Barrow, Alaska

None seen on the ridge N of Voth's area.

16 June - 1 seen by Sullivan between Br. Hn's & Voth's Area.

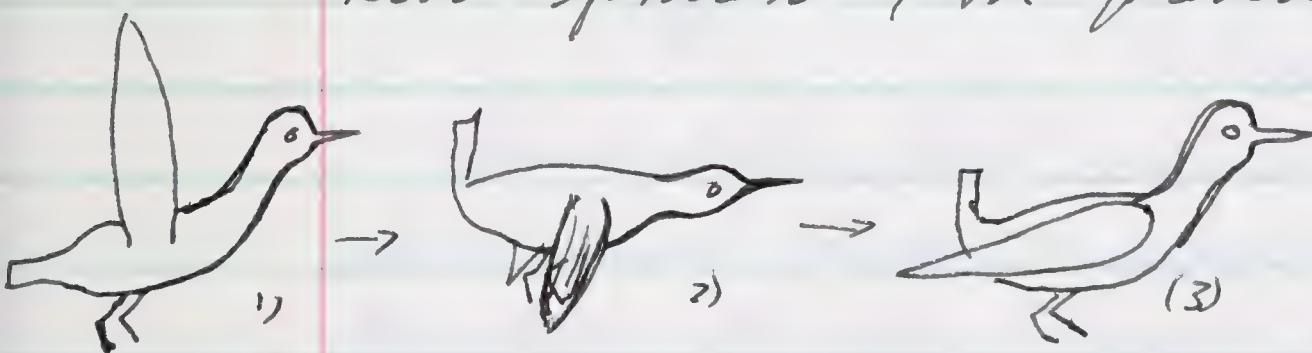
20 June Two birds seen &/or heard in the plot at Ikroavik. One was chasing a Pectoral & then got chased by a RB - near 20.0 → 20.4 - .

Holmes, R.
1962

Erolia luscicollis

6 June Barrow, Alaska

One bird - seen feeding on ridge top. 200 yards south of 25.0 - ~~Thoravik~~ Census Plot. - once gave short buzzy trill while feeding. The as a Dunlin landed nearby ^(10') after completing an aerial display, the white-rump raised one wing - toward the Dunlin - then spread both wings horizontally - cocked tail - walked in this posture for about 1' - brought both wings into the body & keeping the tail cocked kept walking toward the Dunlin (head was now up - as opposed to the head forward of the previous posture).



All the while the bird gave the buzzy-zee-pow, call [this descr. of the song does not seem appropriate now!!]. When about 1' away from the Red-locks - the bird assumed normal posture & began feeding. Later - it fed right next to the bird - with no effect. This display must have been brought on by being disturbed or alarmed by sudden movement - ???

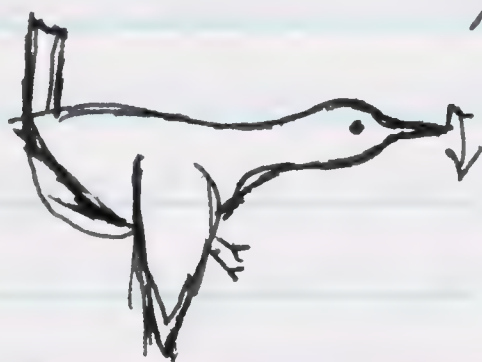
9 June Two birds seen in company with E. ferruginea just south of Britton's area. They

Holmes, R.
1962

Erolia fuscicollis

9 June Barrow, Alaska

was watched during the entire afternoon. Most of the time was spent in feeding, but one bird was seen to give a courtship display twice. The posture here is as we have recorded it - with perhaps the head held a bit higher - or at least as high as the upswing - when the call is given. The note seems to be more like zha-poonz, zha-poonz, ...



given with quite a violent movement of the head up & down. The ♀ paid no attention.

This displaying bird would fly & give a short aerial fill & each time upon landing - the wing (1 wing) would be held vertically for a second & would then be folded slowly into position - almost in a deliberate (or ceremonial) manner. This was seen at least 10 times. Once - the bird landed about 40' from the other white-rump wheel warbler feeder near 2 Runlin. After the display landed he apparently was alarmed & raised one wing toward these other birds - then lower & raised it again - 3-4 times. Suddenly - the other started to fly & headed over this

Holmes, P.
1962

Erolia fuscicollis

3.

9 June Barrow, Alaska

wing flasting individual. As they got above him - he started to raise the other wing & in the up & down fashion. It so happened that each of his wings was out of phase with the other - causing quite a confusion - since one wing would shoot up as the other came down - & so on. After a few seconds he took flight & followed the swooper - finally settling down near the other w.b. This alternating wing-flasting was apparently in response to these other birds & seem to be a frequent display & function - probably signifying a recognition or awareness condition.

Later when the second courtship act was seen - the ♀ seemed to get in the way of the ♂ - or I should say vice versa - since he seemed to interrupt or fuddle. Soon after the ♂ stopped strutting - I watched the other bird (batman) the displayer - who could not be found then & later in the evening).

12 June - One displaying bird seen near the south shore of Wainyan Creek - NW of the census plot at Ikroavik. The bird flew several feet when disturbed - stooped on & moved with crypto wing raised to the vertical

Holmes, R.
1962

Erolia fuscicollis

14 June Barrow, Alaska

and facing me. This was held for 35 sec - at which time it was lowered - It flustered twice. The bird then turned, flew low over the tundra (2-3') for 50' - It turned upwards to 30' where it showed a outstretching, down-arms, quivering wings for 5 sec (wind was in wrong direction - so no sound was heard) - Then the wings were set V & the bird spiralled down to the ground, landing with both wings held up momentarily - then folded. Later it was seen to chase a Puffin - by a fast, down-follower flight.

20 June Ikroavik - 1 seen & heard near the warrigan - chasing a pectoral scap. - not found again.

24 June Ikroavik - One heard displaying twice west of 22.4-23.4 - off the census plot. Once it was chased by a display of ♂ P.S. - which gave it several aggressive quips - as he followed behind the white-rump - a short tortuous flight - It returned & gave a whoop - then display. The white-rump landed near where he had been before - with wings held up at vertical & began to feed.

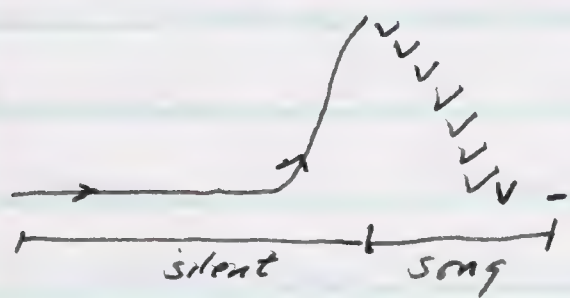
Holmes, R.
1962

Erolia fuscescens

5.

24 June Barrow, Alaska

The south end of the plate was revisited during the late afternoon & the male display was found west of 24.4 → 20.4 - along the edge of the large lake. He performed several display by flying low over the ground with a fast, deep wing beat - The shooting up to 50-60', gave one or two "steading wing beats" which in flight he called quivering & then set wings at 45° and floated or glided back to the ground. The song was given as soon as the bird leveled off from his climb & it was given as he glided down. He



usually landed on the
heaps of mud - piled up by
the ice cake - at the edge of
the lake - once it landed

on the ice cake itself. As the bird landed, the wings would be held up briefly - then lowered into position. It once was closed by a puff of air when gave the gurgling rattle & it once closed after a small (♀ or partly developed ♂) as it flew swiftly by (this was done by a swift flight - the white-rump following closely behind the P.S. - then turning & giving a puff - as it glided back to the lake shore.

Holmes, R.
1962

Erolia fuscicollis

6

24 June Barrow, Alaska

One hour after landing - The bird fed back along a polygonal (low-cut) ridge & suddenly dropped into a depression - 2' east of a 15' diameter pond - which lies adjacent to the large lake. The bird put his chest into the bottom of the cup - tail & folded wings pointing high into the air & made to move back & forth as it pushed the chest into the cup. After about 30 sec - its straightened tail into the cup - its head & tail at about same ^{level} ~~angle~~ - not angled in with tail higher. It then turned 5 times - each time sitting & squawking a bit in a different direction (1st N. - E - SE - S - W) finally return to a head-pointing S. direction - at which time it stood - in the cup & began pecking bits of grass from around the cup - which were tossed to the side - i.e. "over the shoulder." These were thrown to both sides - casually alternately. It then stepped out of the cup - & stood about 3" away - again pecking bits of grass & throwing them to the side & into the cup. It then returned to the next cup - stood again - pecking on vegetation, finally sitting & turning & moving its body from side to side. Suddenly

Helmes, R.
1962

Erolia fuscirostris

24 June Barrow, Alaska

It stood up - stepped out of the cup & flew up directly to about 30' - looked down given the pong-zee - & when near the ground - glided off, landing 50' away. The length of time spent in the cup was ~6 minutes. This apparently was the ♂. No sounds were made when the bird was in the cup.

27 June I heard displaying - & chasing - a flock of ♂ Pectoral Sigs flew over the south end of the Ikroovik Plot. The nest-cup display was observed. The cup was about 2½ inches in diameter & 1½" deep - with freshly dug - out bottom - with a few pieces of dry grass laying across it (on the floor of the cup).

2 July One displayed - as a group of 4 flocking Pectoral flew over south end of Ikroovik Plot - by flying behind this flock for 5-10 sec giving the pong-zee. Later 2 more brief aerial displays were heard west of 21.0 - near the lake & near the site of the previously described nest-cup display. The call note of this bird is a deeper, not so highly pitched sound as heard in earlier years. It perhaps can be characterized as a deep: pung-zha, pung-zha, ... - given in a sequence of 8 - 20 times.

Holmes, R.
1962

Erolia fuscicollis

8.

2 July Barrow, Alaska

This may be closer to the note of adult birds - while the higher note may be given by one-year old birds - This may be borne out by the fact that we are at the edge of the range of this species & \therefore a great percentage of yearlings would not be so surprising.

5 July None seen on Ikroavik Plate

Holmes, R.
1963

Calidris fuscicollis

7 June Barrow, Alaska

One seen + it's aerial display was heard briefly - near Troplem ~~IIA+B~~.

15 June One display on Ikroavik census plot.

17 June - Not seen on Ikroavik today.

21 June " " " " " "

25 June One bird displaying on south end of Ikroavik plot. The bird flew low along the lake shore (to the west of the plot 23.4) + then cut into the tundra, ~~staying~~ ^{flying} up to about 30' - where it hovered - rapidly beating wings + gave the rapid purr-ree sound. The sound was up at the point + made it difficult to hear the song. It then flew swiftly down + landed near the lake margin - where it began to feed. Several minutes later - it moved south on the pond at the end of the plot + displayed there. The bird was collected late in the afternoon.

Upon skinning (Pitellu-), some yellow globular fat was present under the opterae, small delicate blood vessels of a branching shape were running along with this fat layer. The development does not even come near that of Melanotos but there is some suggestion of "pectus" development. No development was evident

RTH
1963

C. fuscicollis

25 June Barnett, Alaska

by external examination - i.e. throat did not sag - as in melanotos.

29 June 1 heard - south end census plot

3 July 1 Displayer heard near 13.4 - twice + briefly. Later a second hovering displayer was seen on the plot + he had then moved towards the west.

The song when heard from a distance gives a pulsating effect + could be reproduced as UNB-zz, UNB-zz - a OING-zz. When heard closely - the zz - (zz) - has a high pitched rise - zz-. (The ["p"] sound does not seem to represent this sound correctly). When first seen - the bird was hovering in a quiver display - giving the above doublets (2/sec) + after about 10 sec - he set his wings in V + glided off to the west - gave no audible sound.

14 July - Muller brought back sev. specimens from Bernard River, Banks Island, Canada. One was a ♀ with well dev. brood patches - she was accompanying 3 chicks - which were also collected. Before collecting + killing, there was a ♀ in the area about 1/2 hour - + no second adult arrived - i.e. apparently no male was around. A second adult

RTH
1963

L. fusci collis

14 July Barrow - Alaska - BANDS ISLAND.

also proved to be a ♀ - she had incubation patches. Neither of these birds had any specializations in the neck region - no difference in the fur, no vasculature, etc.

The birds were scarce near Maher's camp - but were found in the wet areas. Considerable evening nesting was noted by Muller.

Holmes, R.T.
1964

C. fuscescens

1.

4 June Barrow, Alaska

One indiv. seen on south slope of Wohlsehlag flough.
As he flew (W.) - he displayed briefly - by
going into a hover for 1+ sec. + then continued
the fast flying flight to the west.

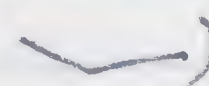
6 June

- 1 lone indiv. feeding at edge of melted pond -
near Wohl & Elson lagoon; another was 2 PS
(1 ♀, 1 ♂) in south central marsh, just ^{100 yds} ~~east~~ west of
P. t. lagoon. ~~Eden~~ When the lat was
confronted with the w. bird - it stopped feeding,
+ tucked bill under scapulars - in displacement
singing.

7 June

2 on BR, 2000 ft north of P. t. lagoon. - flew
gave aerial display on casted wings, landed -
lot fluffed 1 wing, head 2nd bird. One
other was seen on the song was heard while on
ridge. One seen + collected in pond area, north of
Voth.

call note

On N. BR, west of 4 barrels + E of beverage antenna -
3 seen - 2 apparently a pair chasing + 1 1 then
performed several aerial displays. Chase note
was either a subvocal ^{+ high pitched} "schlecht", or
occasional "soot", An aerial display -
flew low (3-4') over the tundra for 75 yds. Then
suddenly flew up to 50', + glided back to
the ground - outstretched (wide )
wings - gave 3-4 doublets. The song soon
more like "ung-za (sh)" - Then the P. t. lagoon

Holmes, R.
1964

C. fuscicollis

7 June Barrow, Alaska

although even he does not know the proper sound. Late 3 su - chase - with ssst being ~~heard~~ given when they soundly. Chases are very erratic. The birds move close together, swerves for each to see - often travelling long distances in a more or less straight line but ^(sweeping) swaying from side to side. - Several but 1 he saw was heard during the evening, although the display was not always in sight.

chase

8 June

No. B.R. - 4 seen chasing back & forth the ridge (near 4 barrels), + 1 indiv. that joined them for a few seconds. Then turned & set down & landed. After standing for 30" or so - he was startled by a ♂ Pectoral which flew directly toward him & gave a jabber chase note while in pursuit. They parted in flight after sec. sec - he was moving into the marsh - the south side of the ridge. The other 4 chasers were seen later near the beverage containers.

PS - 1

In late morning - one indiv. was seen & heard in display over the tundra to the south of the BOT (4 barrels area). Another, probably a ♀ was also noted. 1 aerial display - 195 sec in hovering flight - but wing beat not as chattering nor as vibrating as


wing beat

RTT
1964

C. fuscicollis

8 June Barrow, Alaska

afina or baudii - but more flaggy - it covers a great arc - (This needs checking from a different C - group did not appear to be down-curved in the same manner as afina's). Stayed at 100+'. then dropped suddenly - almost straight down + the spread with a sharp V, landed, kept 1 wing raised for 2 sec, then lowered it.

Later, the individual was feeding on the south slope of the ridge - suddenly took flight flew south low over the tundra, encountered another bird in the air - they flew together for several sec, the #1 bird in pursuit - he then set his wings  + both landed. The protob was given the song - but was too far to hear. As he landed -

1 wing was kept up + waved toward the indie (4?) - he cocked tail, head held up (i.e. not horizontal with body) faced 4 - & flashed 1st the left wing to the vertical (+ returned it to folding position) then the right. - each wing flashed about 3+ - (at each time it cocked the vertical, it was held there momentarily & then lowered). Later a 30' aerial display note - song was discontinuous. Usually

Landing wing up

9d. d.

RTT
1964

C. fuscescens

4.

8 June Barrow, Alaska

given for 1 sec - then not for 5. This was
also the general pattern in the longer
display flight but then the intervals
of no song were sometimes longer.

At one time, this display was
standing on a small patch of ground,
apparently sleeping. A ♂ PS - flying
along ~~and~~ toward the general direction
had just given a series of hoots +
then landed about 15' from the WR -
he then ran toward the WR - & actually
bumped into him - or at least pecked
at him. The WR jumped, & flew about
2' later - flapped his wing toward the
PS - who then ran toward him +
supplanted the WR. After this, occurred
one more - both took flight - the
WR apparently chasing another WR
the PS follows behind. but gradually
fell behind & landed - the chase
event off to the west. So inter-
specific aggression seems to be quite
strong between PS + WR

- 1 displaying on Pitik's, plot near 1st ditch
(ca 3.0 - 4.4).

9 June One ♂ still displaying on So. side / No. head
ridge - sev. aerial display seen - some as clear as yesterday.

WR vs PS

PS → WR

Holmes, R.T.

C. fuscescens

1964

9 June Barrow, Alaska

Another display on top of the ridge -
north / in 4 bands - + 1 close over
seen between it + the south ♂ -
circular flight - 5-8 sec note - one
bird gliding + giving the song -
The numerous pursuit. -

Other was - were seen about 300
yds north - near fresh lake + 1
was flying ~~across~~ across the road near
the SW corner / fresh lake (close to the
pile of barrels). This species is more
common now than I have seen it in
6 years.

- The specimen collected on the 7th -
was a ♂ - very fat all over body -
including lower cervical region - However,
nothing special was noted - no blood
vessels to the subcutaneous region were observed &
the fat ^{here} was the same texture as that in
other parts of the body. One feature -
was that when the fat on the neck was
scraped off - The feather tracks were quite
noticeable - in these areas a cross - wall
of small ridges ~~the~~ raised less than 1 mm above
the flat skin. This same corr'd is found in PS
at this season, but I am not sure about
other spp. This may be common to all ??

RTT
1964

C. fuscicollis

6

9 June Barrow, Alaska

Negative evidence for Thr. specialization here is not proof - since I do not know if this individual was displaying yet or not - perhaps this develops after the birds settle. ?? - after I must admit this doesn't seem likely.

In afternoon - at least 5 chasing in area half way between No. B.R. + Fresh Lake - maybe two pairs + 1 ♂ - but not sure. In one case, a ♂ displayed aerially, landed with both wings up, ran a few steps, cocking his tail & then lowered wings to side - but arching

them stiffly - tail closed + pointed -



bird waving (from side to side) -

walking behind bird #2. At this - a 3rd indiv. flew in on set wing (I was too far to hear vocalizat.)

& flew forward displaying wings - when took flight.

There 3 were the ground by 2 others who appeared from elsewhere:

The low flight over the tundra & then sudden rise in both swept wings to a height of 30 to 40' - is quite diagnostic & several indiv ^{or sev. dist. from} were located by this pattern.

In evening - at least 3 + possibly 4 displays ♂♂ in area north of ridge - several flight displays & chases noted - ♂♂ seemed about

wings up
landed
get display

RTH
1964

7.

C. fuscicollis

9 June Barrow, Alaska
as follows



Several ground courtship displays observed & photographed - very flushed given toward ♀ when she lands near ♂. ♂ usually folds wings immediately upon landing - He wing up at that time

No nest scraping seen. ♂ chased 2 chicks

PS - gave song on set wings & then returned to leader. PS - moved in then drove.

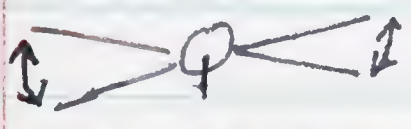
Holmes, R.
1964

C. fuscescens

10 June Barrow, Alaska

aerial?

Several chasing on area, not 1 BR or 2
mostly at the 4 bands + near the gasline.
Aerial flight is not a down curved wing but
or rapidly beating wings at usual position
- head is held straight ahead
+ moves down as the



double-noted call is given.

chase

Chasing continues. often with 4-5 birds
involved. The chaser (s) often sets his wings
at 45° & glides for a brief moment (1 sec) +
then resuming the flight (chasing). The chase note
is the "ssst" given repeatedly, often in great
succession or by more than 1 bird so that it
sounds like constant twittering.

gd. a → PS

WR → PS

Ground "courtship" displays were seen & photographed
several times. Tuvia, a w-r. gave one towards
♂ PS - (full posture with song) - who flew
away - only to be chased aerially by the
WR. Also - a WR danced near a band -
gave the posture 1 time & the chase + not
the zip or ssst chase note. Maybe this
is ground aggression. rather than courtship?

In afternoon - 2-4 WR - were seen chasing
through the area north + west of AACS + ~~the~~ sev.
aerial displays were recorded (20', 30', 20', 40')
after crossing the head ridge + heading for gasline
ridge - saw a bird down a ground courtship

RTT
1964

C. fuscicollis

9.

10 June

Barrow, Alaska

To another. After sw. sw. - another bird
glided in - carted wings + landed. The
bird in display, the female + chased the newcomer
The passerine male was collected (subadult).
At least 2 ♂ + 1 female nudge.

In evening, one displaying on Voth's bluff -
100 yds NE of cake-eater site.

11 June

North of N.B.R. - bird on ground (a later displayer) -
wing flash to ♂ PS flying over. Sev. minutes
later when 2 ♂ PS went chasing over him -
he took flight - flew up to 20' - + glided
down on set wings, given the song. Landed -
walked 20' with some feeding steps
+ he settled into a cup - surrounded by tall
grass - so that I could barely see his head + tail -
turned around twice + settled down twice,
tail raised high (almost to vertical) -
The stood up stepped out, walked
sw. steps + flew, giving a flight up to 20'
+ a glide back to the ground
(no hovering at peak in these display)
This nest-scrapsing was not performed
very enough to or intensely, so as to
compare favorably with that of the species -
but was a weak attempt at least.

The bird evidently was a ♂, since it had
previously displayed (also did so after); no ♀ was

nest of

RTH
1964C. fuscicollis

11 June Barrow, Alaska

seen nearby - but the bird was chasing other indiv. during the morning & about $\frac{1}{2}$ hr later - landed aft a 60' hovering display - & went into a ground courtship toward a feeding bird - who stood nearby - appeared looking at the displaying bird or turned & pecked at the ground. In the latter case it moved slowly away & the displaying bird followed in a teetering motion - Then, after 60 sec - he resumed normal posture & fed - sev. min. later, ~~waited~~^{flew} up & displayed (hovered at 50' for 85 sec). CM hovers at 40, 40, 20'. Most of the hovering is usually high (40-60-70') & the bird gets to this position by a steep rapid climb.



In the hover, the wings are fluttered or

flapped rapidly - but not quivered as in alpeina. Also their position is general high - at the level of the back or slightly above.



very blunt as in alpeina + the wing is

The high level of the wings is quite characteristic & agree diagnostic. Baridii has with the flaps flight with wings curved, & large arc or the down-curved quiver. Puzells & alpeina just have the down-curved, rapidly beating quivering wing strokes. Also - back is not as stiff as in alpeina.

RTII
1968

C. fuscicollis


11 June Bonne, Alaska

Hawking is always s. but the bird faces ^{into} the wind

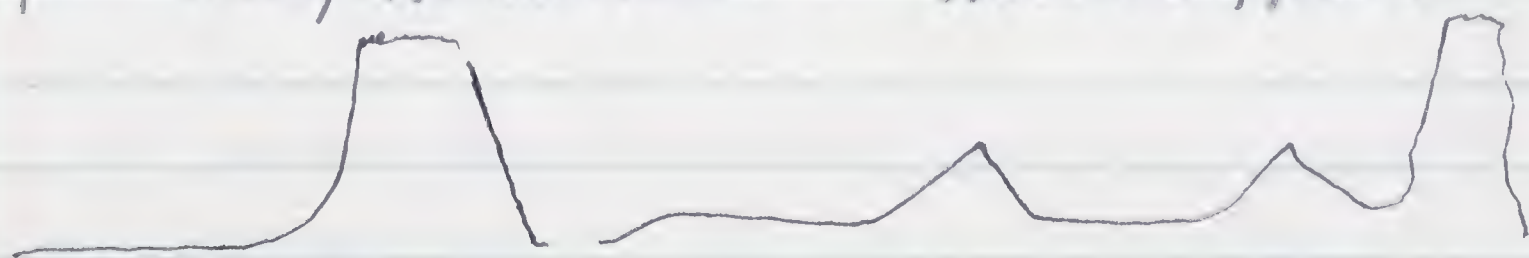
Bird collected yesterday was a ♀ (Maclean #230) - wa to 17mm - heavy fat - no brood patches

So the recipient of the ground display was a ♀ in breeding condition. She remained passive during the performance, as has been seen in certain other instances - perhaps this display is given in many contexts - to other ♂♂ (?), to other sp (PS, DS) - to ♀ - & it is a matter of the ♀ remaining in the area & accepting the ♂ & his action. Not likely to pair formation????

Another typical aerial display - is the low flight - the sudden turn upwards - but not steeply - reaching peak - usually at 20-30' or lower & the sailing down in set wing - giving to 70 degrees -

and the hovering at the peak.  At the end - the bird will either land - & fold wings normally - or will fly - low over the tundra - repeat the again - down a kept - flying - hover display.

This may be involved in boundary patrol



Usually lands off 1st display - or not above - or repeat

RTH
1964

C. fuscinervis

11 June Barrow, Alaska

One indiv. - in landing aft. a flight display - kept 1 wing at vertical, then lowered it 1+ sec. later. - He was seen twice. 1 bird seen on Pilethol Pt near 10.0 - 2 or 3 chasing & displaying east of bend in beach ridge & 3 chasing near 4 barrels.

12 June WR - displayed after low flight - sharp climb - hover at 60' for ~ 60 sec., landed - fed for sec. - flew 150' landed - ~~stood~~ walked 10' to cap, stood in it, squatted & settled, tail nearly at vertical, curved breast into both caps, ^{→ rotated one 90° - pressed again} backed out of cap (aft about 20 sec), stood at edge, with torso movement of head (couldn't see what was being tossed) - always to the left - probably tossing grass or lichen into cap. This was a deliberate & rather jerky movement of the head in rapid succession - but grass (- object!) not tossed but more deliberately dropped. Then bird then moved halfway around the cap & tossed head to right (still toward the cap) - did this for about 60 sec. - then walked into cap. stood there for 1-2 sec - half squatted. then walked out - fed for 1 1/2 min & flew low - 1-2' off ground - rose to 30' - glided down - set wings & fan song.

WR - supplanted by PS twice. Both flying when 1st seen. landed - WR 1st - then PS. PS ran for WR - WR gave call note (4-5 6th) & flew 6' & landed

Holmes, R.
1964

C. fuscicollis

12 June Barrow, Alaska

The PS followed, landing near the WR - when the first flight, the PS following but then veering off - 1 glider, down for display - a set was - landed. Another flew over, the one on the ground first raised the right wing to the vertical then lowered it & the raised the left, lower it & flew off in pursuit of the flying.

Display as #1 of same ♂ - 100 yds south of #1 cellat map. Fed nervously - but was moving on course, heading for the cap - walked into it only then quailed out, made a wide circle around it & then moved back & settled, with tail at vertical, head's bill just above ground level - then rose & scraped with feet - several pieces of lichen & fr. grasses - flying out behind - then bobbed out - keeping tail high & breast close to the ground - picked up several bits of vegetation from the bottom of cap. Then while standing outside - began the grasping & throwing with a rapid, jerking motion of the head to the left - i.e. towards the cap. This scrape was on a low mound; half covered with brown grass - some - half black lichen - cap was - full of grass - as bottom was eroded. More - few scattered pieces of "leafy" lichen - not a well formed cap.

Scrape site #1 was on a similar site

Holmes, R.
1964

C. fuscicollis

17.

12 June Barrow, Alaska

- was of the same state / condition - i.e.
just a scraped cavity with debris - only
a few bits of debris

The first two sequences took place about
10 min. apart - about 5 min. after #3. By
the same bird was seen to do the display
again - 300' south of #2 - He just settled
momentarily into the cup, tossed out a few
feathers & he moved off (with the ceremonial
backing out of the cup). Scrape was as
as other - a cup with bottom scraped
clean - few pieces of debris - grass at edge of
cups were matted - i.e. probably by the bird
rotating - the cup. - After bird left cup - he
flew up & hovered at 45' for 20 sec - then
flew down - set wings.

- Boundary conflict recorded near row of drums -
One ♂ went up to 30' - scaled down on set wings
landed, folded wings - flapped - wing. Almost
simultaneous - second ♂ was doing the same
thing - landed - spun tail about 4'
apart (only the 1st did the wing flout - as the
2nd settled) - both went into - hunched,
back feathers - ruffled, tail depressed & spread
posture as they faced each other - for
about 20 sec - then both flew back toward the
own area - each gave a hover display.

♂, ♂
ground

RTH
1964

15.

C. fuscicollis

12 June Barrow, Alaska

Simultaneously + then each landed within
then on area.

W. way up for 1st + 8th PS, garrison in hooding
display.

N. Cuf

Next up a ridge, over flapping antennae
walked into air, stood, sat, scoured ser. ser -
set with tail vertical + did a half rotation -
picked at adjacent vegetation - perhaps picking
it + dropping it into air - but the worm not
actually ser. - 5 typed out - picked + dropped
4-5x - on left side + 4+ times - on right -
Then went on far ser. sequence on east side +
then he moved off feeding. My feeling is that
it is not as formalized as in ferax -
in apure + bandii

Number today probably about the same as
before - but birds seem to be settling down -
+ there was less chasing than in preceding
days. It generally seemed scarce -

also in afternoon - 2 pairs - one

observed on the white-rump nests 1 on

ridge. In one ^{nest was above} the other did a courtship

ground display - but the ♀ paid no attention

kept on feeding - the ♂ quit after 45 sec ±.

This was the only ground courtship seen

today - this also seems scarce, maybe

other pairs have nests?

N. Cuf
get. ch
f.

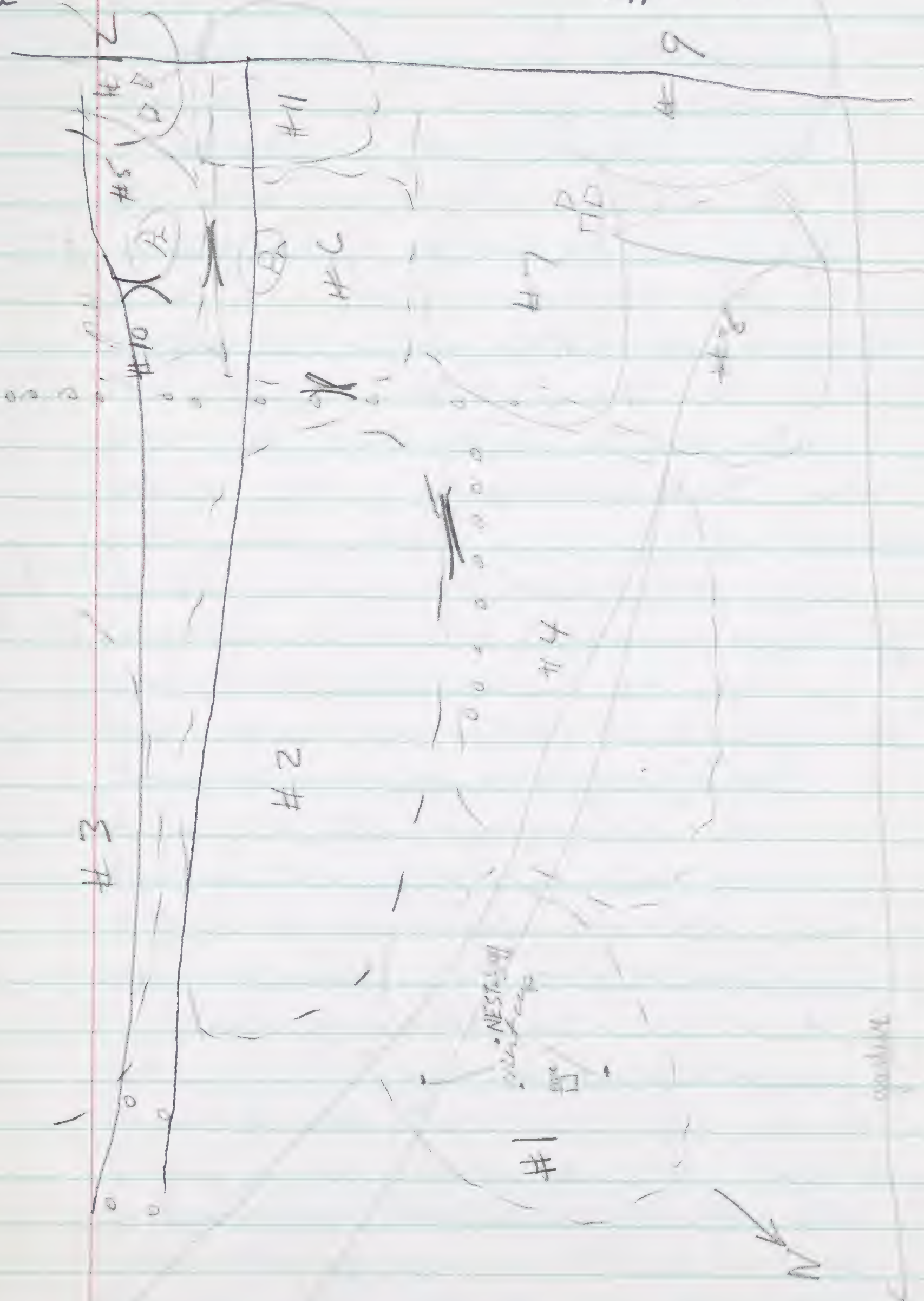
RTH
1964

C. fusca

16

12 June

approx. 1001 00



RT4
1964

C. fuscescens

17

13 June Barrow, Alaska

(PS → 2nd)
PS - chasing 1012 (WR - gun, tssst, the PS - the guy be chase note) - then a 2nd WR joined + gave a set wings as all 3 landed. - Fed for a minute - then the 1st WR who had been chased flew up, the 2nd WR - w/ my flashlight toward it - + the landed 150' away, walked into a area of thick grass + scatted onto a nest! - Walked up to it - The incubator stayed on it until I was 8' away, then flew off - with a slow wing beat - (order gave a wild distraction disp. - tail lowered + fanned, hunched posture with back feathers ruffled - wings dropped almost to the ground - shuffling off - giving a short, high pitched note tst, or tssst. Nest - contained 3 eggs - lined with loose (fluffy-textured) lichens + moss - (it appeared to be picked ^{or torn} apart) - on large flat polygs - mainly in center - but drive in margin where nest was located. - 10% covered by surrounding vegetation (grass - sedge blades). - Therefore - the displaying bird was not on the nest - but the other was - with one more egg yet to come. This was the same ♂ which was seen yesterday to give 3 nest-scraping displays. - Either the are used in pair-bond matters + therefore may continue three egg-laying; or if the pair-bond is loose they may give in attraction other ♀♀ - ???

RTT
1964

C. fascicollis

13 June Barrow, Alaska

country picture for 10 sec & then went off to display - usually.

♂ #7 - next exp. new bee. antennae - well formed
exp (2 1/2" dia, well macrothorized with 6 to 7
grains - exp). - displayed - landed - walked &
exp. sat, tail exp. turned in 1 direction - in
rotation back, forth, facing 1 direction - re-
mains air muscle) stood a exp. picked
up sw. piece of grass (obsr.). 2 d walked he began
to pull & break - there were ~~some~~ then
went on exp - The ♂ then stepped out - picked
grass & held it in it & left & turned into exp -
again with deliberate motion of the head - from
1 side or the other. After about 1 min -
The bird flew off in a chase & 1 c nearby
displayed.

14 June

Nest-#1 with 3 eggs still at 1100. 1 pair at north edge of P. telba's plot - after arrival have display - ♂ landed near ♀ - gave ground court display for 10 sec. - then ♀ went out of sight - the ♂ at the same time began to feed. As I walked up - ♀ appeared running away in hunched posture (tail normal - feather not ruffled - mild intermittent rodent-run) - ♂ stood by gave two (2 sec.) wing rases - (very away from me) - then ran in the direction of the ♀ in an identical posture to her - i.e. rodent

RTT
1964

C. fuscicollis

20.

14 June Barrow, Alaska

run - after going about 40' - he stopped - stood up & then ran again & took flight. Whether or not there had been concern about a nest is questionable - a nest was found - but behavior suggested a nest-leaving posture.

Another ♂ located & doing so. gave display at corner of beach ridge (on inner side).

Little activity near beach or there & the nest.

Wing-flutter (1 sec) to ♂ PS in between displays

WR-#1 - ♂ (at least the ♂ displaying near nest

#1 - was seen in two nest cup displays, 1 within

25 yds of Nest #1 (but probably not within sight

of the ♀ on the nest). In first display - ♂ gave a

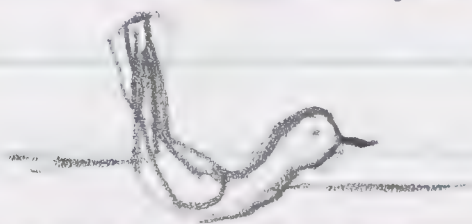
low intensity display - by just getting into cup-sitting, tail high - for 5 sec - then stepping out

& moving off to an aerial display. After about

3 aerial glide display & the intervening feeding

periods - he went into the cup near Nest #1. First

Sat with tail high (wings folded & legs at the



side of the tail so that white

ring shows over ♂'s

head from frontal view.

He then stood, scraped with both feet

first one then the other. He then

stepped out of the cup - stood beside it

& began the grass-mowing. In this

RTH
1964

C. fuscicollis

21.

14 June Barrow, Alaska

event, the head is turned deliberately + the grass is then dropped or thrown - but ~~the~~ the head is not flicked to the side + grass tossed as in ferruginia. In fuscicollis - the head is turned about 1/sec - which results in a rather rapid movement. As before. usually 3 ~ 4 ~ 5 are given on the left + then the same on the right (or vice versa). After about 2 1/2 min. at this cap - the ♂ watched a few away + displayed aerially.

Pair together again (#5) - just feeding near each other on south side / ridge - white another ♂ (#10) displayed nearby. Little chasing seen today.

15 June Nest #1 with 4 eggs. ♀ stayed on nest until I was 3' away. She flushed giving the short ssst note.

dd) - mild d.d. with tail down spread, hunched posture with back feathers ruffled - runs over polygon.

Later, as she was feeding normally - the ♂ appeared + did a brief nest cap display in the cap he had used yesterday - (his tail was in vertical position). - He was 20 yds from the nest.

Aft 2-3 sec in cap. he moved off feeding - with no reference to bird (#4). ♀ assoc. with 3, + possible one with #2. In 3. ♂ gave 1 courtship display to

perceive ♀ + they were watched feeding together for 1/2 hour +. Sev. aerial hawk-like displays noted.

Holmes, R.
1964

C. fuscicollis

15 June Barrow, Alaska

2 pairs collected on a near gulch ridge;
These were all that were seen there. Now
seen a upland toward the gulch. - Saw under +
1 chase in morning 4 were seen near moraine. at a
beach ridge.

Saw chasing & displaying on N. beach ridge
in evening. Also had a nest #1. -

16 June

Male #1 - gave her + sons - landed - ran 100' -
to ♀ who had been feeding - performed a ground
display for 10 sec. she remained passive - the
both fed - the ♂ displayed aerially - landed near
♀ - ground display - fed - displayed - landed
75' from ♀ - after about 30' sec - she
flew + landed about 3 feet from him - he
performed a ground display - these activities
went on - & that the ♂ performed at least 6
ground "grouse" displays to the ♀ - Two of
the times were when she flew to him after
he had landed for a aerial hover display -
(he was usually not over this feeding
♀ - but 100-200 feet away + at fairly low
altitude - 25-30'). After these 6 ground
encounters - the ♂ again displayed - +
landed about 250 feet from the ♀ + went into
the nest cup which he was using 2 days ago
(the one about 2570s from the nest - which
by now had a ♀ incubating during all this)

♂ & ♀
(+ 12-15 min)

for cup

Holmes, R.
1964

C. fuscescens

23

16 June Barrow, Alaska

The ♂ stayed in the cup for the next 10 min - giving mild intensity displays involving sitting in the cup with tail high & rotating slightly or in one or two cases vigorously - no screaming or grass tossing was noted. The ♀ walked slowly - feeding along the way - toward him & after 10 min of crossing polygons, tops, grass around sev. ponds - she arrived & fed within about 1' of him - while he continued to sit in the cup. waving his elevated tail feathers & folded wing tips - which were facing her (i.e. he was facing away - although occas. he would turn & look in her direction). After standing near him for about 1 min - she suddenly took flight & landed 20 yds to the north. - The ♂ followed & just before landing set his wings (for feet to her / song was quiet but it probably was) - At this point I lost track of the bird. - All the while - the other ♀ was - the next closely (at one time she too came off the nest & fed downward - but then I followed her as she walked back to the nest & sat). The ♂ did not regenerate her at any time - even when I had ^{later} earlier flushed her & photographed the nest. Then it appears

RTT
1984

C. fusca capillaris

24.

16 June Barrow, Alaska

That the ♂ continues to court & for entire other ♀♀ after he already had, a complete ditch.

- #2. was seen with a second bird - probably ♀. #3 was heard to display.

Nest #2 found between the 1st ditch & the east head ridge & the row of closely-spaced stakes - 20 yds south of the corner - 200 yds north of Pt. Barrow Plot - on west-facing slope & ridge - about 40 yds up from the edge of the marsh - 4 eggs - in relatively bare (bare - moss) ground but in a tuft of sedge - 80% exposure. - ♀ showing brood behavior with postures and up - settled into nest quickly - but came off it flying towards me when I was 40' away. gave no d.d. but cooed around at 20-30' distance, giving the first call in an excited way. One when she flew around me - the ♂ buzzed in, set wings, sang - ^{on site} ^{1 circled} then went into an aerial loop - later moving off.

- other up on the south of the ridge & near the corner - where they seem common to the north and west. Occas. feathers dangled as ♂♂ descended to ground.

RTT
1964

C. fuscescens

25.

16 June Barrow, Alaska
after display.

17 June Two more nests - but a white-rumped
of beach ridge - Nest # 3 - 4 eggs - north slope
of ridge - 200 yds south of platform (AAS) - moss + lichen
covered ridge - ^{100' above marsh} nest - left of Antegustus -
90% exposure - in territory 6

Nest # 4 - in south slope - 100' above
cm - 30' above well travelled road - nest in
line between AAS + eastern edge of ^{NO.} meadow lake
(territory 5) - 4 eggs - ♂ displayed +
in air by ♂ - continued wings.

One displayed to by ♂ buff-breast (very
out + round posture with tie note). - ♂ # 13
pursued + displayed no ♀ seen - ♂ # 2 with
♀ (ground courtship) on weasel trail.

In steep climb to aerial hon notes -
white-rump is very conspicuous laterally
- in to and sides. So not only in climb
specimen - specimen - but the white-rump is
clearly visible when the bird is in a
perpendicular ascending position.

In afternoon - a ♀ with male # 2 + one
with # 10 - no broody tendencies noted.
3 ♂ seen but ♀ not found. ♂ # 8 seen in
display.

2 ♂ collected 6/15 - examined - see F.A.P.'s notes
- throat has different quality fat (i.e. more lobules)

Holmes, R.T.
1964

C. fuscicollis

17 June Barrow, Alaska

in ♂ then in ♀ - a possible fine blood vessel extending from the neck region to the skin. Thus, there is a suggestion that some development is found in the subcutaneous layer of the neck in AD - but it does not compare in any way to that found in melanotos. No inc. patches ~~with~~ these specimens - but the ♀♀ collected with them were still laying (one had laid 2; the other 3). - See F.A.P. Catalog.

collected

18 June

Now-went/gardens on beach ridge - several around mean met & to the east - chasing seen fairly frequently - with usually 2 birds involved. occas. 3. Nest #5 on south side of beach ridge. 25 yd from wind tub - on lichen-moss slope with only tufts of grass - Arctagrostis one of which contained the nest. Substr. was 95% exposed. - I did a very mild d.d.; - mostly standing about 30' away - picking at the ground. Nest contained 3 eggs.

Added ♂♂ # 14 + 12 to earlier group. Nest was in 11' area. - #10 present + displaying, but no ♀ - 2-1 bird seen. ^{usually 1 bird nest - some + 105.}

2 ♂♂ collected by P. Belcher & Gardner - 1 showed disc. + edema. Nest, 1 not shown. - North breeding patches (one has 4 with 4 eggs on its territory).

Holmes, R
1964

C. fuscicollis

19 June Barrow, Alaska

Worked No. 2A. from micromet to 4 drum + north to fuel lake + drum area. Activity was generally low. No displays seen or heard in 1, 3, 4, 5, 7, 8, 9, 10. A ♂ at #2 - displays once. He ♂ at 6 + 12 were quite active - displaying aerially + #6 did ground display to 2 ♀♀, 10 minutes apart - (one was from nest #5 - I believe) - neither bird showed any signs - other male standing still + not feeding while ♂ was in display.

Nest check #1 - ♀ present

1 chick/nest

#2 - —

#3 - ♀ present

#4 - ♀ gone

#5 - ♀ gone - complete with 4 eggs

#6 - ♀ present

One noted in display (aerial) south (=west) of fuel line ridge.

In area #4 - no ♂ seen - but a ♀ was found, apparently hurt - or at least unable to stand properly, & only able to fly short distances. The bird was caught + collected → FAP 64-12 - ♀ was clearing brood patches but no eggs laid yet.

20 June

2 ♀♀ + their clutches collected by Pitelka - south of fuel line ridge.

RTH
1964

C. fuscicollis

28

20 June

Barrow, Alaska

#11 ♂ present + displaying + 1 other ♂ to the south.

Also - #12 present + displaying

2 New nests = #7 - 30 yds east of phone pole -
N. 1 m on nest - 4 eggs - ♀ incubating - moss
tundra - mossy lichen covered ground - scatter
clumps / grass. #8 - in area 10 - on
south slope / ridge - 3 eggs - ♀(?) incubating or at
least on nest - on mound where two old
weasel trail runs in clump / Arctostaphylos.

Nest check This p.m.

#1 - ♀ present

2 "

3 "

4 - absent

5 - present

7-8 - ♀ on when found

When ♀ flushed from Nest #7 - The ♂ who had just
completed an aerial have display - landed
& did a ground chase after her while she
was in violent d.d. - he watched
after her (not staying put re Avery) -
with a slight sway - wings out to
the side & down - drooped - tail up
- head forward - Then wings brought
in but tail still up. Then tail down
- as ♀ did not respond about
kept sheathing off.

Holmes, R.
1964

C. fuscicollis

29.

20 June Barrow, Alaska

Other display activity was low. but
apparent #1 was present - chasing 2
other birds (may have been 2 ♂♂, after 1
♀ - but #1 returned to his area). #2
present & displaying. 3, 4, 7, 8, 9, 6, - not checked
5^{x10} not seen - 11 & 12 present & active.

In evening, #11 displayed several times -
little other activity. Most aerial displays
now are hover displays - very few of the climbs
& then immediate down-glide.

Evidence at this point suggests that
(1) The species is evidently polygamous - since
♂♂ give ritualized ground display to every ♀
and any ♀ - including those with a completed
clutch & those doing distraction displays &
for territory. #11 which now contains
2 nests. ^{to ♂♂ + other species} (2) ♂♂ do not incubate ~~and~~ and
do not associate with the nest (e.g. specimen
without brood patches; ♂ always
feeding &/or displaying - never showing
decoy actions or other nest-associated
activities - ♂♂ have stance on the
tundra, suggesting a ♂ PS - i.e. vigilant
alert - ready to take chase at any time -
this posture & behavior is about the
best method to separate the sexes in
the field. (3) There is little if any

RTT
1964

C. fuscicollis

20 June Barrow, Alaska

specialization +/- modification of the subcutaneous layer of the cervical region of ♂♂. At first - a lobular fat with accompanying vascularization but in examining a ♂ B5 - this was found there also + in 1/1 the UK - there was no evidence of anything special.

21 June ♂ #12 + #13 - were displaying - mostly by head display - 1 ground contact = ^{see film} see descent of northern-mut - micromet shack. Nest checked in evening 2000-2100. - #3, #7, #4 had ♀♀ incubating, #8, 5 - were hatching ♀♀. #10 + #11 ♂♂ were present, and gave 1 aerial head display while I was in the area.

22 June ♂♂ 12+13 active between 0500 + 0700. chases + aerial head frequent (chase involving 3-4 birds - around micromet areas). ♀♀ 3+7 on nests incubating late in morning - #1 ♂ was displaying near nest-1. ♂ #2st not found. ♀♀ on #1 + 2 were incubating. This a.m. - 2-3 ♂♂ were seen - near herd in beach ridge.

In afternoon - ♀ seen with ♂ 12 near Micromet. This ♂ was actively displaying - as was the ♂ to the west (#13). One ♂ along Pitelka's road near 10.0 - (in march).

RTH
1964

C. fuscicollis

31.

23 June Barrow, Alaska

Nest check - #1, 3, 4, 7, + 8 - had a bird incubating, #5 did not (#4 was off for awhile (~5 min) - but returned while I was watching her. New Nest found by Maclean - N south slope of the ridge next to the gasline - almost to the polygonized area toward gasline ridge. - 4 eggs.

♂ #11 - gave ground displays to the females for nests 4 + 7 within a 5 minute period. In each case - as in all ground displays, the ♂ would do this for about 5 to 15 sec - then, bring wings into body with tail still cocked - then put tail into normal position, turn + run off - the ♀ keeps on feeding. In one case today, - when the ♂ brought his wings ~~into~~ ⁱⁿ ~~down~~ from the horizontal position - he kept the forewings but the wrist was held ^{away from the ~~horizontal~~ body +} horizontal - so that it



appeared as if the bird had two "shelves" on each side,

extending beyond the cocked tail. Head was forward but slightly above the horizontal - the song was given continuously.

I have yet to see any stamping of the feet as was described by Drury - the bird's feet were regular, a feather slightly from side to side.

Holmes, R.
1964

C. fascicollis

23 June Barrow, Alaska

♂ PS-gave ♀ WR (who had just received a ♂ WR ground display) - a ground courtship with his tail coiled, head up - kraw-ka-m call - she kept - feeding - & he ran away, he followed for sev. feet & then took flight. Later a ♂ WR gave - ground display to a ♀ PS.

♂ #11 - with two nests in his territory - gave a nest cup display 25 yds west of Nest #4 (i.e. between 4 & 7). He extended the cup & stood there, scraping with both feet, alternated for 5 sec - then settled into an up with tail high & rotated once - stood up. pulsed ground & found several times - then he moved away - always looking cautious - perhaps aware of my presence. North WR mark at the juncture. Both nests had an incubating bird. Earlier - a ♀ was found near the phone poles - courted by the ♂ - but may have been from one of the nests. The fact that he is still nest-scraping & giving the ground display to incubating ♀ - is further evidence for soon pair bond. Also ♂ #6 seems to be gone - or at least not in care of Nest 3 - i.e. ♀ + nest with no ♂ nearby.

Holmes, JCT
1964

C. fascicollis

23 June Barrow, Alaska

Chasing frequently involves more than 2 ♂♂ & during these encounters, they pay little respect to territorial boundaries - & when they move thru an area in which the occupant is feeding - he will join the group. All adds to the confusing picture of territorial behavior - but when an individual is watched, he will patrol his area, announce on a running display flight often at regular display stations near the periphery of his territory.

When ♀ on nest 7 was flushed today, she began to give a violent d.d. - At this point, a nearby ♂ zipped in - landed immediately behind her & began his wing out - ground display - but she raised her tail coverts & wing tips - exposing the undertail coverts from him - at which he stopped, folded his wings, lowered his tail & began to move away. She then resumed d.d. posture (hunched - tail lowered & spread) & moved off.

24 June Nest check: ♀ on at 1, 3, 4, 7, 5. Off on 8 only. As I approached Nest 7, the ♀ moved off & I was 60' away. Saw - wing flash

Holmes, R. T.
1964

C. fuscicollis

24 June Barrow, Alaska

toward me & then moved off in a mouse run to the north. (at rt. angle to my path). (#9+10 sound & given R - coll. by FHP)

Nest #11 - 50 yds east of gasoline - at NW edge of polygonal area - found yesterday by Maclean. - located in large low polygon covered by scattered grassmosses (2020) - & lichen-moss. - 4 eggs. ♀ incubating.

#5, 11, 12, & 13 ♂♂ present & showing some display, especially the latter 3. A bird was seen in 10 which may have been a ♀.

Display: except for the male near microphone has declined sharply. Yesterday, there appeared to be a unmated ♀ in this area which was receiving considerable attention from 2 or 3 ♂♂. She was not seen today but may have been present.

25 June

Throat: 1 ♂ displayed briefly near 25.1 - concluded. Two others seen closer to 15.0 - No other seen or heard around Throat. Probably activity has declined here, as it has in the head ridge.

26 June

Nest check: #1, 3, 4, 8 - on nest; #5 off & not seen.

♂♂ 1, 2, 3, 4, 10, 6 = not seen. #'s 5, 11, 12, & 13 present but announcement-type display very infrequent & nearly all song heard (was declined during chase).

Holmes R.T.
1964

C. furcicollis

26 June Barrow, Alaska

One chasing scene today involved 4 ♂♂ (#5 + 12 + 2 others) - #5 chased the other 2 - landed - all fed - #2 very flustered at the 2 but did agree to be ♂♂ - then gave a mild ground display - but then all fed [the 2 males at one point went into displacement sleeping] - then ♂11 arrived & came followed - after given about 150 yds - all landed - #11 signified one after performing a ground display to it & chased off to the north (all had landed - #11's area) - returned about 30 sec later & chased a second bird - the third flew off by itself. This appeared to be a Flock of 2 ♂♂ - been joined at least temporarily by #5 - but broken up by #12 - who is still strongly territorial.

♀-repaired
A broody ♀ near micromet shack - ♂ (12) landed nearby - gave a intense ground display with vocalization - she tipped forward - raising her tail & folded wings up into the air & making the white undertail coverts obvious to a ♂ who stopped his display. This head-and-raising of the ♀ - when not receptive to a ♂ - is one with a clutch already completed - seems to be characteristic of this species when there is no or only little

RTT
1964

C. fuscirostris

26 June Barrow, Alaska

pair bond - in picture - off/break - not seen at all in RD, BS, S P.

Two ♂♂ (12+13 - probably) - in aerial parallel flight - one ♂ would glide - wings - saying - while the other was - vibration wings (probably not displaying but not fully beating wings) - both rising high & high into the air (200' +) 1-2' apart - ~~and~~ - then bird calling a set wings 3-4x - finally one peeled off & returned - This was similar to the ♂-♂ Pectoral contact when both birds are participating in a boundary contact.

Several along Gasline Ridge in areas where WR had been cleared out (shot) before. Two separate individuals displaying (briefly at ~ 40') on Pitelka's plat.

27 June Nest check 1 - gone. NO sign of Ad. or eggs - predated?

3 - ♀ inc.

4 - ♀ inc

5 2x shown on; 1 shown off

6 - ♀ inc. collected

7 - 3x - ♀ incubating

8 - ♀ inc.

11 - ♀ inc.

(14 - not checked)

Only ♂♂ seen were those near monument (#5, 11, & 12) - there is still an unattached pair near eastern bldg - which may be the reason that the ♂♂ there

RTH
1964

C. fascicollis

38.

27 June Barrow, Alaska

are still relatively active in display. - Then on the three ♂♂ whose territories about together near the location of this ♀.

♂ 12 - gave a single note & just the zee which usually introduces the purr-zee which lasts about 2-3 sec & must be a note described by Druce & Smith as a typewriter carriage or foot-heel running. The quality of song by different birds varies in pitch & loudness - some are very deep & can be described as roark-zee-whereas others are a higher-pitched purr-zee or purr-zā. This variation in song quality may be due to age difference, as observed in melanotos.

WR ♂♂ are very aggressive to other sops - Chases of BS are particularly common & today - on to an kept chase & supplemented a BS feathered I had fluster for a nest - for about 3 min - with giving it several ground displays - with song & several aerial glides - but ending during chase. Also - chased RB, PS ♂♂, RP ♀.

A chase involving 2 birds seen east of ♂ #1's territory - but may have been different birds.

Holmes, R.
1964

C. fusacollis

28 June Barrow, Alaska

Nest check 2 - ♀ nearly feeding - came in as I approached.
3, 5, 7, 12, 13 - ♀ on
4, 8 - ♀ off, eggs warm

Only display heard at bend / beach ridge where 4 birds were chasing + harassing 1 ♀ - from nest #12 (see below) - Usually one ♀ would land uninvited behind ♀ - Before to give ~~the~~ ground display - The others would land + canon on the ♂ - The ♂ would stop display + all would take flight - with the ♂ it appeared in pursuit of the nest. This apparently was a flock of 7 ♂♂ - Several minutes later, a single bird was seen feeding on the slope near the nest (where the ♀ was sitting) + during this time - 2 birds + the displaying ♂ went by - within the display seeing his wings + singing. He came back + fed 100' up the slope - paying no attention to the lone feeder. When the latter was collected, the ♂ gave a ground display + it was while he was collected. The lone bird was a

Nest #12 - found by MacLean - 4 eggs - ♀ inc. On north slope of BR - east of microwave - a relatively bare slope, quite bare + more scattered grass, some rocks, not 80% exposed.

RTA
1964

40.

C. fuscescens

28 June Barrow, Alaska

Nest #13 - on No. slope B.R. - No. of Nest #
3. - 4 eggs, 1 inc. - On low portion of slope
in mossy ground with scattered plants &
clumps of grass & sedge. 90% exposed.

- No advertisement today - only song
heard was during chases. Recalling
back - ♂ frequently rises to display &
holds on outstretched wings - but gave
no song - or gave it intermittently.

WR in dld. - often goes shuffling off
on the tuck and tail depressed & fanned,
back feather ruffled & wing parts out
to the side (to varying degrees) - but
usually bent at the wrist



- in wing held as if not used
to close to body - but
prevents air partly
fanned side.

In evening - have seen or heard a fulmar
nest; 1 ♂ seen feeding near microphone.

♀ for nest gave a wing up - flap
as she was returning to the nest after
being disturbed.

29 June Had 14 + 1 settled ♂ (near nest #12) - east of mag. station
+ 2 others. see notes below in reference to
collected specimens. - Flock of 5 moving west
along North Beach Ridge - stopped near in -
stood 6"-12" apart - then picked up & moved west.

RTH
1964

C. fuscicollis

29 June Barrow, Alaska

All birds on nest today (1400-1700) when checked.

♂ #12 present - no other in study area seen - heard in display.

30 June Nest check: all on nests in morning - all two when 3+7 were checked later - the ♀♀ were gone
1 chase involving 5 birds (flock 14 + 1 settled ♂ probably) - chasing repeatedly & vertically on the tundra - when they landed one - the 1 ♂ began to chase 2 indiv. members on the ground - before resuming aerial chase.

29 June - Specimen accounts - all collected at N.R.R. east of magnetic station

FAP 64-32

- chased & given aerial

glide & song.

MacLean 248

RTH 2411

} 2 pm flock 15

HEC-5665 - ~~Heater~~ - ♂ - 7:27 am - 39.2

- chased by

another - then fed side by side to chaser.

HEC 5663 - ♂ - T = 9 mm - 39.7 g - display ab. to 5664 ^{on ground}
5664 ♂ T = 7 mm 39.2 g - received ..

RTH - 2411 -

- born indiv.

may have been from flock 14.

RT4
1964

C. fuscicollis

1 July Barrow, Alaska

Met chick #7. ♀ on at 100, rd at 1130

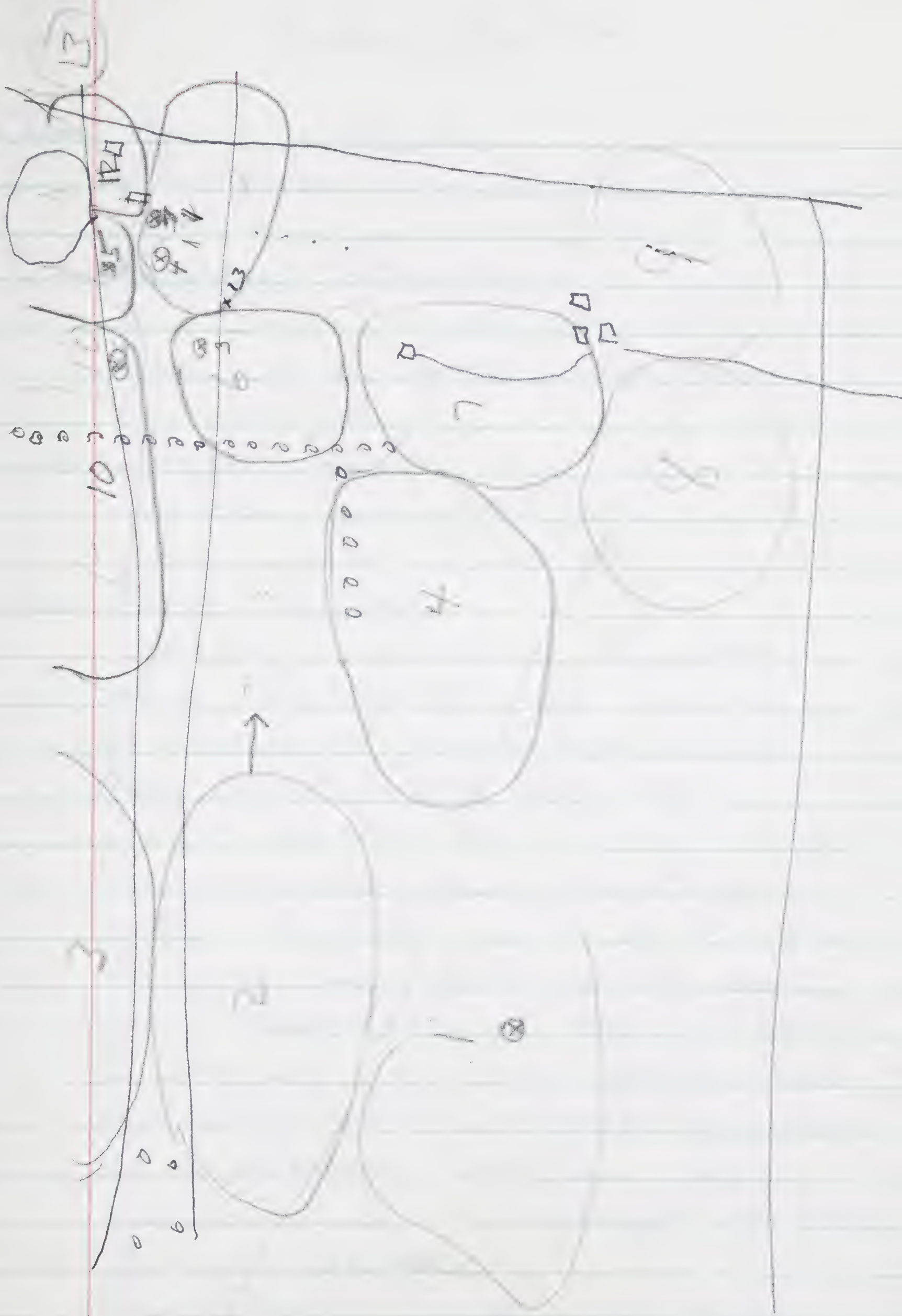
4-10, 5, 13, 11 - all on nest.

No advertisement displays - 1 chase in water
4 birds around micromet - 1 indiv gave
part / a song - but only the 2nd note
heard - the song was very weak ^{+ high pitched.} / ♂ with
group of 4 bairdii - collected.

In afternoon - saw flock of 2-3 birds along
edge of central marsh - occas being
chased by a ♂ near the bank of the ridge.
None of #2 or 12 were on or near their nests.
A flock of 6 feeding in marsh area south of
Trench Lake.

2 July

all ♀♀ visit nests in micromet area. 1 chase
of 3 birds seen by ♂ 12 - he gave weak
song. Have seen part of bev. antennae.
1 flock of 7 south of Trench Lake; saw indiv.
birds on weasel tracks near ATCS.





Holmes, R.
1959

Erolia bairdii

8 June Barrow, Alaska.

Two seen 1 mile No. of village,
and one was collected.

9 June Barrow, Alaska

Two seen near the Voth Area.
These were indiv. separated
by ~ 100 feet.

10 June Barrow, Alaska

One seen near the gas well
road near 2 Turnstones.

11 June Barrow, Alaska

Several pairs seen in the drum
area. The majority were feeding;
however 2 or 3 ♂ were seen doing
their aerial display. They will
fly at heights of 75-125 feet and
give a rapid, hoarse & twittering
note. As they arrive on the ground,
the wings are held vertical, and
then they are brought down to the body.
The birds are very wary at this time
and will not allow close approach
by an observer. One pair was
also observed to attempt copulation.

12 June Barrow, Alaska.

These birds were seen and
heard in the drum area in the
morning and evening and in the

Holmes, F.
1959

Erolia bairdii

2

area around Voth's Slough. Once a pair was seen to copulate, at this time they had been standing on a small patch of exposed tundra. The birds are often seen chasing low over the snow with a climb to considerable heights at times and then return to their low flight. These chases are all accompanied with a fast chattering note.

13 June Barrow, Alaska

One apparently unpaired bird seen feeding in the drum area. Due ^{probably} to moderate S.E. winds, there were no displays seen or heard.

15 June Barrow, Alaska

Several flight display songs were heard this morning, but none were seen. There seem to be very few of this species on the drum area.

16 June Barrow, Alaska

Very few seen of this species. It seems that when the wind is blowing they stay low to the ground among the grass. A few singles were seen along the gas well road.

Holmes, R.
1959

Erolia bairdii

3

18 June Barrow, Alaska

Several single birds were seen in the drum area and so. of it. Probably the mate was on a nest. These birds which were seen were all feeding and would allow a close approach (within 10 feet) of the observer.


19 June Barrow, Alaska

The displays were noted both in the morning and afternoon. The males were seen individually and no pairs were noted. Several conflicts were noted where males were evidently defending territories. No nests were found.

23 June Barrow, Alaska

Several seen along the beach ridge and near the A.C.S. Aerial displays were used several times.

24 June Barrow, Alaska

One bird was noted displaying (in the air) and as it landed, it continued to give its coop. One on the ground the tail was cocked and the wings were raised (to about 135° with the ground \rightarrow ) It then strutted in this position toward another Baird Sdg. which immcd. gave the wing display and then walked off. The 1st bird followed (over)

24 June, Barrow, Alaska

and then both birds flew off in a chase. One time, as I neared a nest area - the displaying bird (♂ juv) came within 5 feet of me and walked completely around me and then moved about 30 feet away. Upon walking toward him, he went into a mouse run and then a distraction display where he lowered his tail and crouched away. After moving about 5 feet to this position, it took wing and did an aerial display.

26 June, Barrow, Alaska

Along the ridge east of the gas line, several pairs were seen. One pair flushed from the grass where there was apparently a nest. One bird flew 50 feet or landed giving the regular display call. The second bird gave a distraction display. She assumed a crouch position with back feathers ruffled, tail lowered and fanned, and head lowered and shaven forward.

The call she gave at this time differed greatly from that of the white-rumped.

It was more of a thin wheezy note unlike the clear kee-tee of the white-rumped.

Holmes, R.
1959

Erolia bairdii

5

26 June Barrow, Alaska

Later a pair was seen courting. The female was walking slowly through short grass. The male had his tail cocked (not fanned) the wings were held horizontally with the tips slightly drooping (but not so much as the white-rump). The head was held straight out, and the same call was given as given in aerial display. This lasted for about 30 seconds, while the birds moved about 2 feet, then a chase began. As the birds walked in this spread-position, it did not wobble nearly as much as the white-rump did, but walked fairly straight. A nest was located just No. 1 AALS. on a rather dry bare polygonized area. It was in a small clump of short grass where the incubating bird was easily visible from several feet away. There were four eggs which were tan with darker brown blotches on the larger end. The nest seemed to consist of a few strands of grass which encircled the eggs. These were probably just matted down as the female laid her eggs.

Holmes, R.
1959

Erolia bairdii

6.

27 June Barrow, Alaska

The nest was checked at 1500. The incubating bird flushed off with my approach. Unlike the White-rump, she immediately left the nest area heading South (using the mouse-run with tail spread). As I was photographing the nest, she gradually worked her way back and as she did so she gave squeaky calls. Whenever I made a sudden movement, she immediately crouched and assumed the distraction display position.

28 June Barrow, Alaska

Another nest was located 70-80 yards N. of the previous nest and just east of a row of drums. This nest also contained four eggs which were tan, but they had redder spots & blotches rather than brown.

3 July Barrow, Alaska

Two nests with four eggs were located along the beach ridge east of the heronry entrance. All the nests were

Holmes, R.
1959

Erolia bairdii

3 July Barrow, Alaska

So far we in rather dry situations, either on the high ridge or on high dry polygons. They have all been among dry grass.

6 July Barrow, Alaska

Several nests were found and/or rechecked today. The two previous described were checked and the incubating birds and eggs were still there. Two new nests were found in the same vicinity and are shown on a map.

Most of these birds were in pairs, that is the second bird was still around. The above-mentioned map shows the nests and the pairs. The two new nests were also in rather dry position among loose dry grass. The eggs are not concealed from view by the grass but are quite conspicuous. One nest was found in the middle of the drum area, about 20 yards from the rest line / barrels. It contained the usual four eggs.

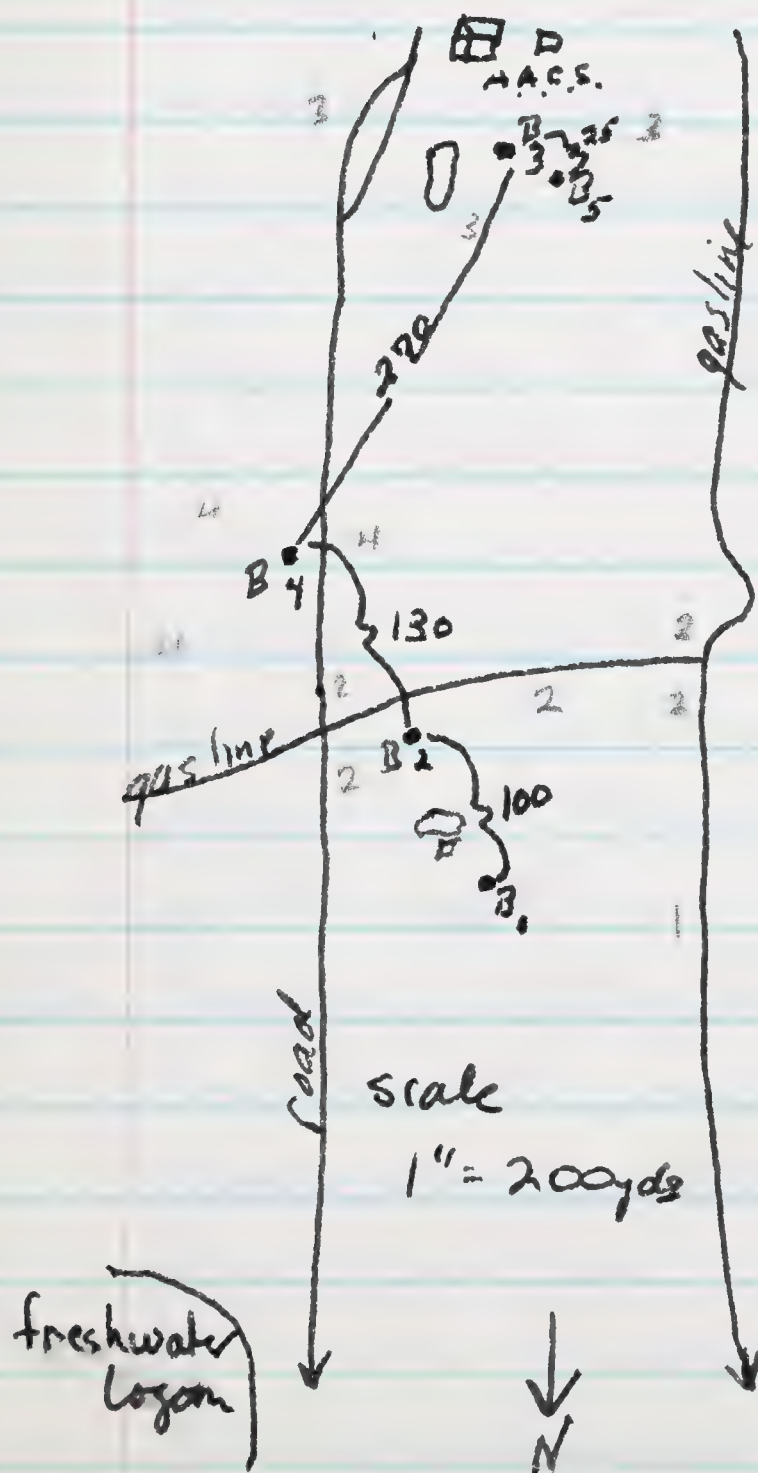
Holmes, R.
1959

Crolea bairdii

8.

7 July Barrow, Alaska.

The afternoon was spent in searching in the vicinity of AACS for more nests. Since the birds are no longer displaying, territory size can not be accurately determined. The spacing on the nests and the positioning of some of the birds is indicated below:



If a square is made which includes all four nests it contains an area of about 8,000 sq feet or 2 nests per acre. Of course there is not including the ranges of these birds and since display has been concluded boundaries can not be definitely established. The numbers by themselves indicate where the adult birds have been seen away from the nest area.

Holmes, R.
1959

Erolia bairdii

9

10 July Barrow, Alaska

A nest with four eggs was found in the Voth's area just NW of the enclosures.

11 July Barrow, Alaska

The nest described above from Voth's area was again checked and it contained the 4 eggs. Both birds were present.

10 July Barrow, Alaska

The nests near AAC's were checked during the late afternoon. Nest No 1. contained the 4 eggs; only the incubation bird was present. #2 still had eggs; no birds present. #3 had 1 egg and 3 chicks, which were mottled black, white, and rufous; one parent bird was present. #4 had four eggs still; both birds present in the area. The nest in the dune area still had eggs; no bird on the nest.

13 July Barrow, Alaska

The nests near AAC's were again checked at 1330. #1 has four eggs and no adult present. #2 had 4 eggs and no adult present. #3 had no eggs and no sign of the

Holmes, R.
1959

Erosia Dairadi

10.

13 July Barrow, Alaska

Young & adult birds anywhere in the vicinity. This nest has been hatching three days ago. #4 had 4 eggs and a bird was incubating. A new nest (#5) was found about 25 yards west of Nest #3. It contained four eggs and was located on the edge of a pile of rubbish on an exposed mound. Another builder's nest was discovered behind ARL building 355. It consisted of a nest-like structure composed of dried grass and sedge. There were four eggs.

15 July Barrow, Alaska

A nest check was made from 1400-1500. Nest #1 was still intact with only the incubating bird present. Nest #2 was just hatching. In fact the shell from the last to hatch was still present at the nest and its former occupant was still wet. Nest #3 had hatched and was hatched. Nest #4 had hatched and no sign could be found. #5 was still intact and only one bird was present.

16 July Barrow, Alaska - 1600-1630

Nest #1 - still had eggs, but two had pipped and were about ready to hatch.

Holmes, R.
1959

Erolia lauridii

11.

16 July Barrow, Alaska

No adult was seen. #2, 3, 4 were all deserted. #5 still had eggs. Very little activity in group as now. Hardly any birds are seen. None of this species was noted near Footprint Lake during the past two days.

17 July Barrow, Alaska

All nests were deserted (near empty) except #5 which had started to pip. In the evening, two were out of the eggs, but one of them had died.

18 July Barrow, Alaska

Two were collected near Nest #1 which turned out to be two males. Both had incubation patches.

20 July Barrow, Alaska

None were seen during the last two days near Footprint Lake.

22 July Barrow, Alaska

A group of 6 were seen just east of Voth's. Two and 3 were collected. Two of them were males; one ^{was} female. They all became excited when the first bird was killed, and all came in closer. The other two were then collected. There seemed to be some kind of an association between them, possibly flocking.

Holmes, R.
1959

Erania bairdii

12

22 July Barrow, Alaska

begin for the southward migration.
All three birds had incubation patches.

24 July Barrow, Alaska.

Two were seen near Voth's Area, but they were widely separated. Nest #3 near HACS was checked for a final confirmation on nesting success. One had previously been found dead & had been removed; one had been alive and active. The third egg had begun to pip, but the chick died before it could get out. The fourth egg did not hatch at all.

28 July Pitt Point, Alaska

Several seen near the POW 1 station and along the ridge to the S.E..

31 July Barrow, Alaska

A group¹⁶ was seen in Voth's area among the high polygons. They were still giving the nasal alarm note. Another individual was encountered in Central Marsh.

1 August Barrow, Alaska

The above group¹⁶ was again encountered, and 2 were collected. They proved to be juveniles. The adults were still early for the young and when the ^{young} were shot, the adults

Holmes, R.
1959

Erolia bairdii

1 August Barrow, Alaska

Became very excited and followed me for 15 minutes while I checked the traps. All during this time, the whining note was being delivered by both birds.

3 August Barrow, Alaska → Beechey Point, Alaska

Two were seen on Coates Island off Beechey Point. They were feeding among the sedge + grasses on the highest part of the island.

5 August Barrow, Alaska

Two seen in the south end of the drum area. Both were giving the mowing-whining note.

7 August Barrow, Alaska

None were seen during the entire day, either along Uohlschlag + Schick Slough or in the Footprint Lake area where many other migrating birds were noted.

9 August Barrow, Alaska

These birds were present in small number on Footprint Lake. About 30 were seen altogether, and these were scattered. One was collected.

Holmes, R.
1959

Erolia dauidii

10 August Pitt Point, Alaska

Two seen within 40 yards of base and 1 downy young was seen and collected.

13 August Pitt Point, Alaska

Two seen again near the base.

None have been seen on the tundra; these two mentioned previously were seen in ^{an} artificial pools created by the road development here at POW 1.

20 August Barrow, Alaska

None have been seen during the past three days.

23 August Barrow, Alaska

Three individuals seen on footprint lake among the large groups of dowitchers and dunlins. One was collected.

Holmes, P.
1960

Exolia bairdii

1.

31 May Barrow, Alaska

One individual seen feeding with two Semipalm + 2 R. Furthest from South of Wohl. Slough + near Elm Lagoon.

3 June - Two seen on small patch of exposed tundra just east (100 yds) of beach ridge. Upon my approach, one gave the wing raising display (the wing towards me). One flew off to another patch, landed ~~and~~ with both wings held high for 1 sec, then lowered both + raised. The one toward me then flew in succession. Both birds then flew off towards the ridge.

One was seen later in the drum area.

4 June - Two seen along the beach ridge near the magnetic station. One performed an aerial display, which lasted for about 50 sec. During the 1 1/2 hours after the display ^{in the same area} the birds were not seen nor heard.

9 June - Two seen near AACS. The ♂(?) displayed very conspicuously by raising his wing towards me when ever I approached. The ♀ had no reaction, except to look up from her feeding.

wingflap

Holmes, R.

Erolia bairdi

2.

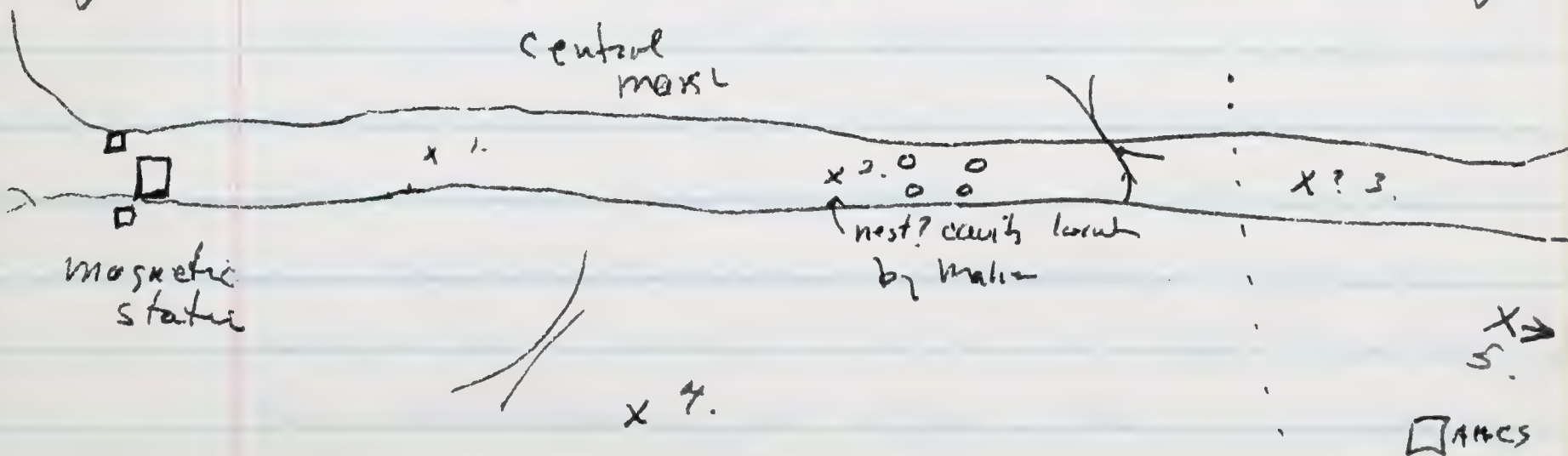
1960

9 June Barrow, Alaska

One seen near the beach ridge - beverox antennae section.

10 June - A pair seen on the ^{beach} ridge, just west of the magnetic station. Both birds were feeding & when disturbed, the ♂ gave several wing-raising displays & then resumed feeding. The ♀ did no display. Maher reported a pair further west on the ridge which had a nest cup with no eggs. The birds (♂?) did a display (wing raising) toward him and at the same time, its tail was cocked. Later the bird which had displayed went to the nest cup & sat with its tail cocked. It then raised its wing (away from Maher & apparently not addressed to WJM). The other bird (♀) then came on & displaced the ♂? from the nest.

11 June - Several pairs were spotted along No. Beach Ridge



Holmes, R.
1960

Erolia bairdii

11 June Barrow, Alaska

These pairs were located in their approximate positions and others were heard N of HACS + east of the magnetic station. Several aerial encounters were observed where the intruder flew over the area of another bird, which immediately took wing + displayed or chased the bird out. On one occasion

Pair #2 were seen chasing bird #3. They landed near the nest cup + ♂2 went into a modified distraction display. His head went forward, his scapulars were raised, and he then proceeded to chase the intruder for 2 feet on the ground + then in the air. The flight lasted for sev. hundred yards before the ♂ turned back toward the nest.

The aerial display of the Baird is as follows: The usual aerial note given on the wing is a continuous pree - pree - pree This is interrupted every few seconds by a trill which is rather musical (not harsh) and is regular in beat (notes evenly spaced). The trill does not drop into a whining as the red-bocks

Holmes, R.
1960

Erdia bairdi

4.

13 June Barrow, Alaska

The beach ridge was again walked from the magnetic station to the gas line, and the distribution of pairs was nearly identical (see chart, p. 2). There appear to be several additional pairs near ATCS, but it was impossible to determine their areas this morning. In the afternoon, Britton's Area + Dot's Area were checked for these birds. Only 1 pair was seen, but several others were heard displaying. When first found, the pair were chasing (♂ after ♀) across the tundra. They finally stopped on the edge of a snow bank where they jumped & tumbled around for 35 sec. During this time, the ♂ attempted to mount the ♀ several times, but each time she would throw him off. Finally the ♀ walked off with the ♂ following closely behind. I could not see her entire body during this time due to topographic conditions, but his tail was cocked & the wings were in a horizontal position.

15 June - a pair was seen displaying. Unfortunately for me they were behind a mound most of the time. One time when they

Holmes, R.
1960

Erolia bairdi

5

15 June Barrow, Alaska

Came into view, the ♂ was in the distraction posture - that is head forward⁺ ^{down} back hunched with scapulars raised, and tail lowered and spread. He was following behind the ♀. He then noticed a bird nearby and raised his wing in "recognition" & assumed a normal attentive position. He then chased the intruder off. Later he was seen following the ♀ with wings spread (true? - body position?), but again this was behind a pidgeon.

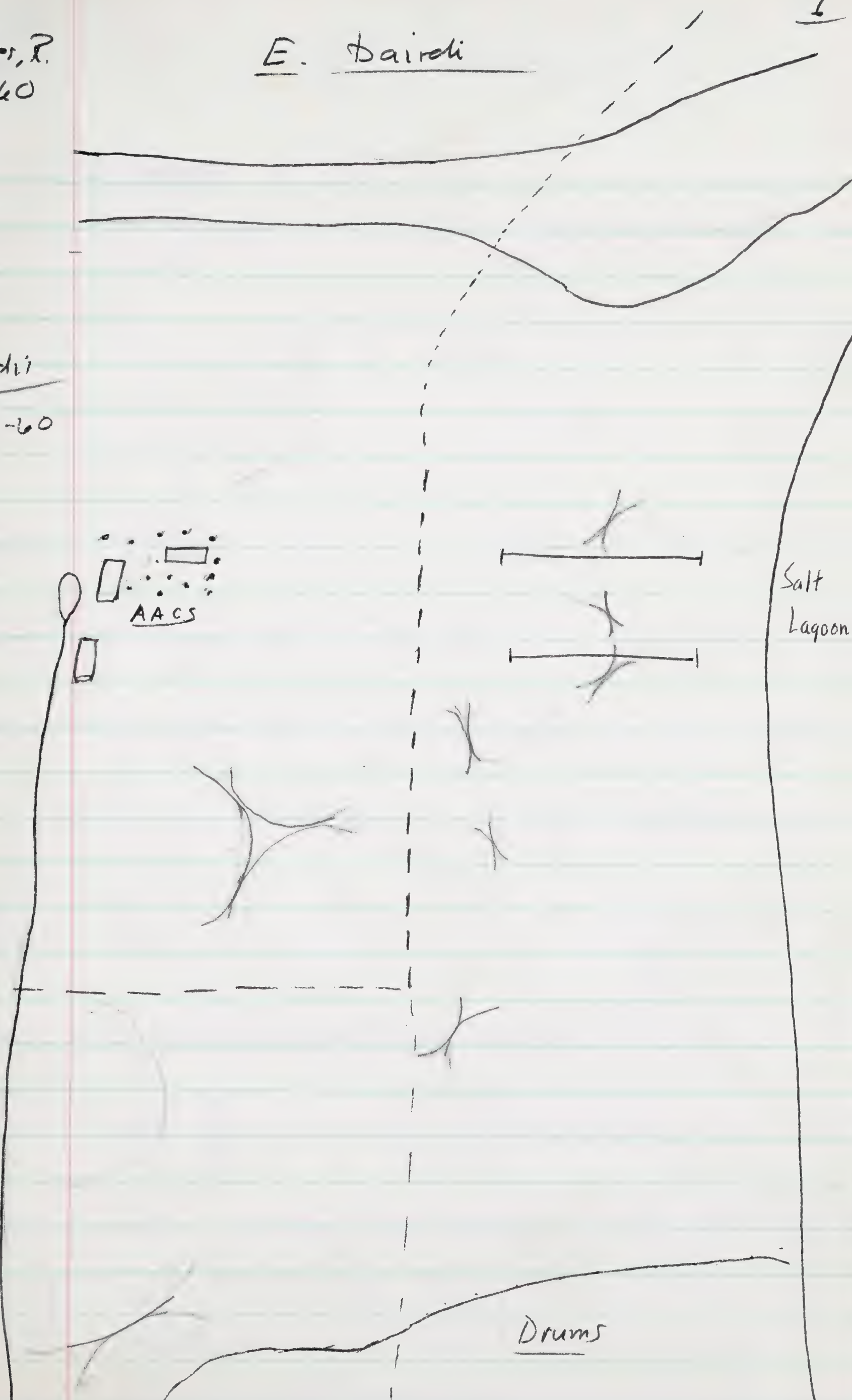
16 June - Several pairs & territorial disputes were noted in the area near AACs. The census maps show there to greater scale & detail.

18 June - The area around AACs was again checked and several bairdi territorial defenses were noted. These are shown on the sketch on p. 7. One of the pairs was seen feeding; the remainder of the birds seen were displaying ♂♂. These latter birds may have had a ♀ or a nest, since nesting is obviously underway. No nests have yet been found however. A partial display was seen again, where

Holmes, R.
1960

E. Bairdi

Bairdi
6-16-60



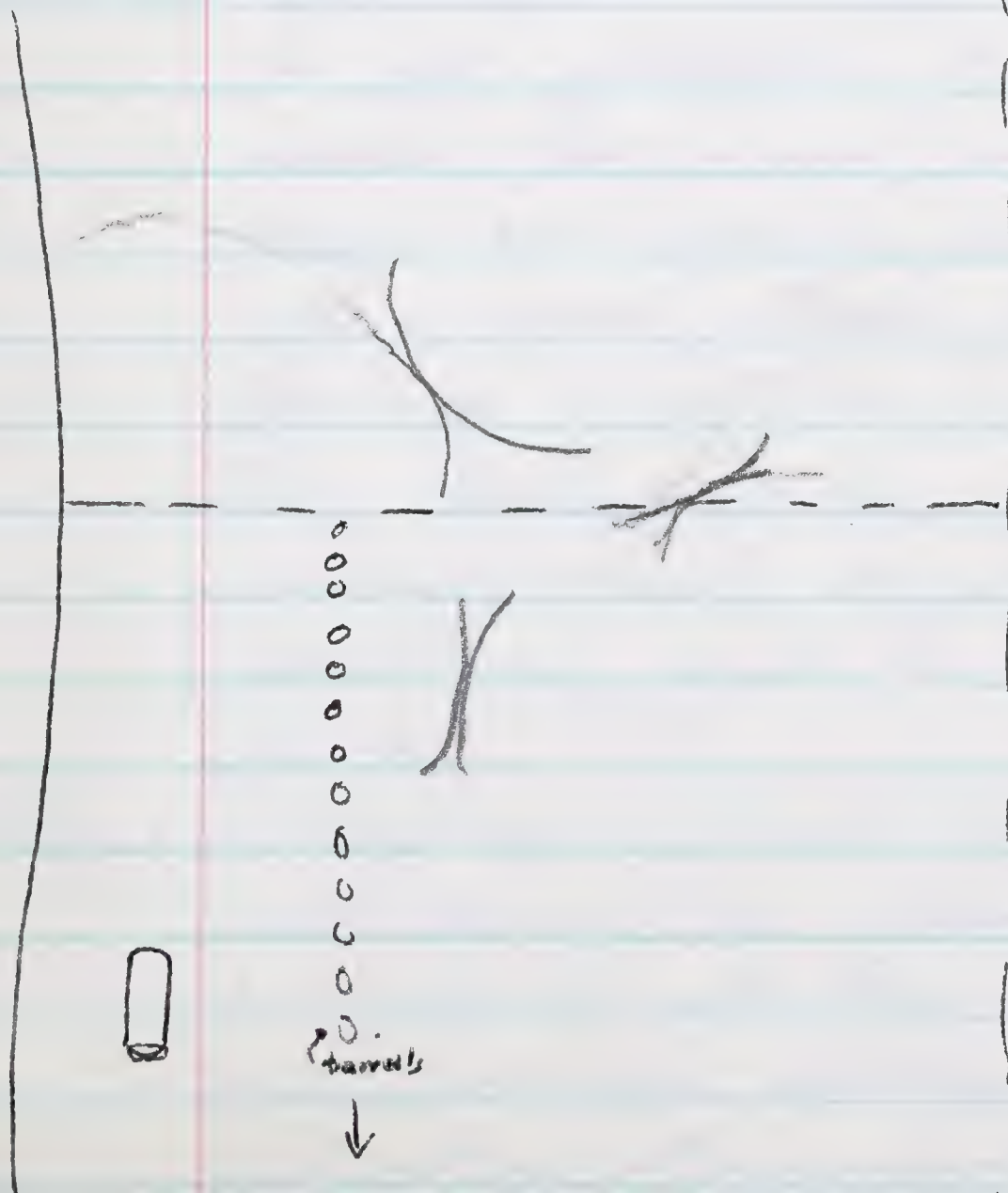
Holmes, R.
1960.

Erolia bairdi

7

E. bairdi

6-18-60



Holmes, R.
1960

Erolia bairdi

18 June Barrow, Alaska

The ♂ had his tail cocked and wings spread horizontally. The view I had was unpaired, but the ♂ appeared to follow as he followed behind the ♀. No vocalization was heard. This was quickly interrupted by a territorial dispute when the ♂ rose to chase the intruder away. He then landed near the ♀ with both wings held overhead, the wings were held in this position for several seconds before being lowered. The ♂ then closed to the ♀ for about 15 feet, and during this time, he tried to mount her several times. Each time she would throw her M & N forward a foot or two. - During the late evening, several birds were heard displaying along the southern end of the beach ridge.

19 June - Displaying birds were heard all during the morning hours (1000-0900) while I was on the beach ridge. They seem to be active throughout the 24 hours,

Holmes, R.
1960

Eolia bairdi

9.

18 June Barrow, Alaska

but this activity is present in spurts.

20 June - Several birds displaying along the north end of the beach ridge. There is a certain twang in their display that seems quite characteristic of this species.

23 June Ikeravik (Barrow), Alaska

One seen during the morning near the hangar. In the afternoon, one was present near the NE corner of the plot. The last individual was giving the whining call & was acting like it had a nest. The area where it was seen is an area of high polygons which look like good bairdi habitat.

24 June - The nest was found in this region this afternoon. It is located about half way between posts 0.0 and 0.1 and slightly to the north of this line. The nest contained 3 eggs and was situated on a polygon top. The soil in this locale is block, but there are scattered clumps of dried grasses which have been cut by winter denning activity. It is near a sparsely stream

Holmes, R.
1960

Erolia bairdi

10.

24 June Ikroavik, Alaska

grosses that the nest has been laid. The ♂ or at least a displaying bird has not been seen in this area. The nest still contained three eggs at 1930.

25 June Ikroavik, Alaska

The nest contained 4 eggs. A second bird was seen west of the wanigan, but I'm not sure whether this bird is the mate of the one with the nest.

26 June Barrow, Alaska

Two nests were located around HACS. One near the trash pile (-scrap - nest page) contained 4 eggs; one on the south side of the buildings near the road & antennae^(#2) poles contained three eggs. A third nest sat toward the magnetic station

for 4 eggs^(#3). Nest #1 which is located near the trash pile at HACS contains 4 eggs which are blotched more heavily at the large end with purple or brown. The nest is on a slight mound in an area that has very low polygons with shallow troughs. There is a depression among the mosses where a few^{short} blades of grass have been matted down.

Holmes, R.
1960

Evallia bairdi

11.

26 June Barrow, Alaska

to line the cup. Both adults were present during my visit to the nest this morning. Nest #2 which is located among the poles south of AACs contained 3 eggs, which were spotted purplish. These eggs were in a cup of grasses which had been matted down. The cup was located on a small grassy mound (1' high - 3' in dia.). Two birds were present. The map on the next page shows these nest locations + several of the territorial encounters which were observed. Bairds were also noted along the beach ridge and in the area between the B.R. + AACs. The frequency of display seems to have slowed down somewhat during the last week. ♂♂ were seen only to display when they were "forced" to by other birds actually entering their territory. And then as soon as these birds left, the occupant would return to the ground + return to feeding or loafing.

27 June - When returning from the owl nests I stopped near AACs to check on

Holmes, R.
1960

Erolia bairdi

12.

26 June

B. K. Edge

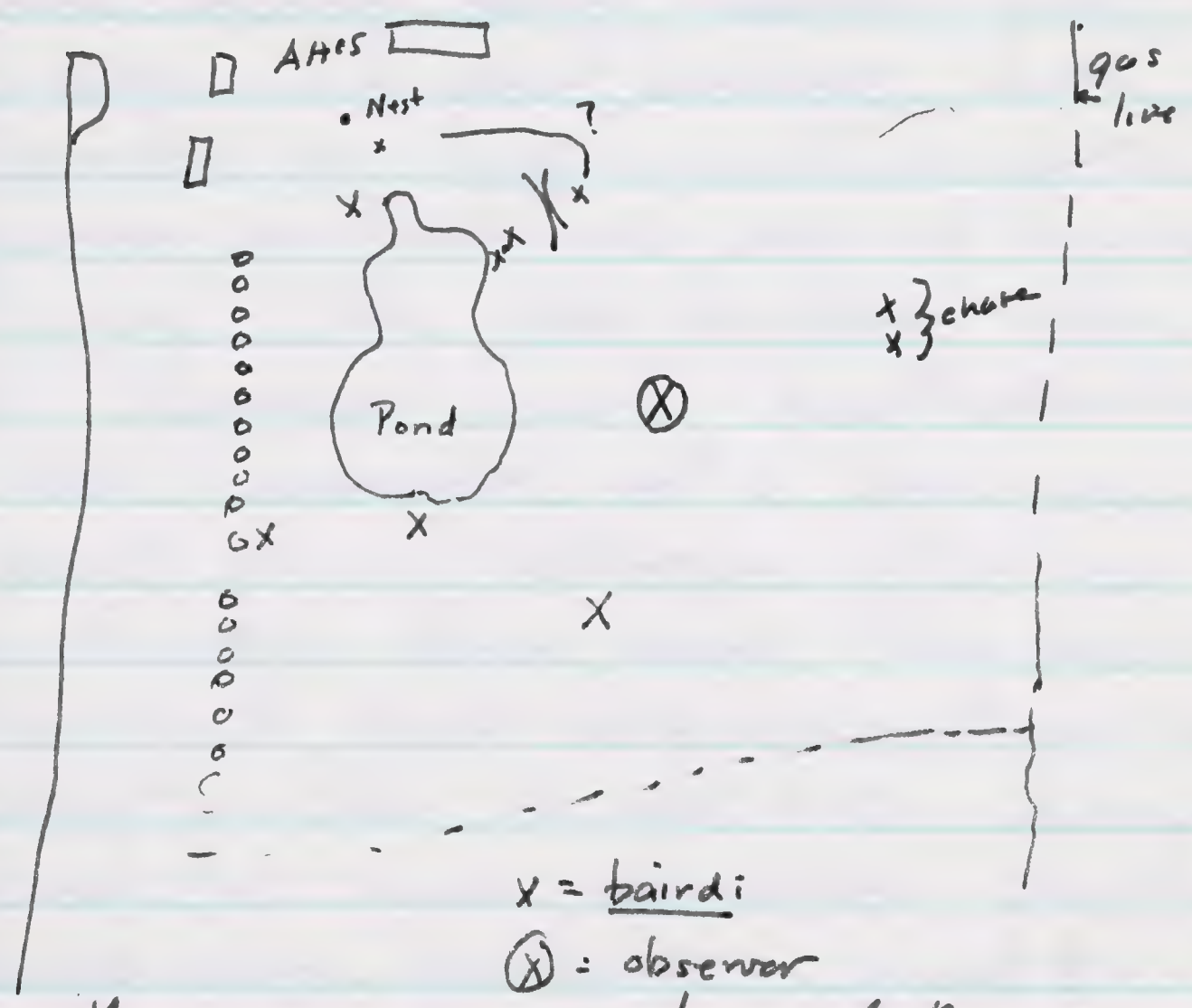
salt
Lagoon

Holmes, R.
1960

Evolia bairdi

27 June Barrow, Alaska

the nests + birds. It is amazing the density of bairdi in this region. The sketch below shows the # of birds seen from 1 spot. - (X): at 1550.



If this is an indication of the density in this region, then the territory size is extremely small (limited to less than 2 acres), which is very unusual. It will take more work here to find out what is actually happening.

In the evening a nest was located on the shore of the beaver ridge (north side). It was

Holmes, R.
1960

Erolia bairdi

14.

27 June Barrow, Alaska

situated on the lower portion of the slope on the north side. The areas within 20 feet of the nest were covered with moss⁺! There was no standing grass + very little fallen, cut grass. The nest, however, was located on top of a pile of cut grass which was over 2" high at the rim. This had probably been a lemming winter nest that had been converted into a sandpiper nest by a hollowing of a cup in the top. There were three eggs in the nest, and only one bird was present. This is nest #4. When nest #2 was checked both birds were present; nest #1 had only 1 bird in attendance. I have the suspicion that the ♂ bairdi may leave before the eggs are hatched. This will have to be watched, especially for the possibility of polygamy.

28 June Wainwright, Alaska

Only one bird was seen near the site, and it was flying + displaying near the buildings.

Holmes, R.
1960

15.

Erolia bairdi

30 June Iktroavik, Alaska

The nest near stake 0.0 was still active, but as before there is only one bird present.

1 July - Another Bairdi was seen west of the wanigan, and this bird appeared to be broody as if it had a nest somewhere near by. The nest was found this afternoon about 60 yards west of the wanigan (15 yards from the Plectone nest + 30 yards from the far Red back nest).

2 July - See discussion on p. 17+18 of alpine concerning comparison of aerial displays. Bairdi in the region around Iktroavik seems rather scarce. In all the time spent in this area, no aerial displays have been seen or heard, although 2 nests are present near the wanigan. Apparently there ~~are~~ only 1 bird at each nest & the male have departed. This suggests may suspicion that this may be a characteristic of this species. The habitat of bairdi is confusing. First of all it is denuded in its range in Alaska. There is a population breeding in the mountains (Pecos Lake etc) when it breeds in the

Holmes, R.
1968

Erolia bairdi

16.

2 July Iktroavik, Alaska

alluvial fans, etc.) and one along the coast. In the coastal region near Barrow, the birds are scattered at regular intervals along the ridges (Beck Ridge, Goshue Ridge, both Area, etc.) where nesting seems to be in bare, rather exposed places. There are usually polygons where are covered with thin black moss + possibly scattered grasses. The nests are exposed directly + even in low lemming years when tall grass is available they seem to prefer these open localities. The group of birds nesting around AHS is puzzling because they are nesting in such high densities and in a habitat which differs from the ridges + other areas. This habitat is a flat area of ^{open} low polygons, most of which are level-topped. Various ponds are scattered around, + the area is torn up by various vehicles. In general the area is a dump since old drums + junk is around everywhere. There are many other areas of tundra similar to this one further inland.

Holmes, R.
1960

17

Erolia bairdi

2 July Ikerasak - Barrow, Alaska

(minus the trash) and there are not used by bairdi. Is it then the disturbed condition of this area that has created the high density? Possibly the amount of insect life has increased with the turn over of the soil or something along this line. In this area around AAS, the nests are sometimes placed in open area & block moss but not always. Several nests have been in a grassy mound where the nests are almost covered by grass. This presents a puzzling problem which will have to be looked into again.

5 July Barrow, Alaska

Some of the nests at Barrow were checked. The nest along side the wood east of AAS was still active, & the bird remains sitting even when a weasel passes within 2 or 3 feet. The nest just south of AAS had no eggs & the adults were not there. There was no indication as to what had happened. Like mine, the nest near the trash pile was also empty & again no signs were present. The nest near the

Holmes, R
1960

Erolia bairdi

5 July Barrow, Alaska

road, north of ATCS was intact, + a bird was incubating (only the one present).
[At the nest - east of ATCS by the road - there appeared to be 2 birds present].

6 July - None seen in Voth's Area or vicinity
They have not been heard displaying now for several days.

8 July Ikroavik, Alaska

The 2 nests near the wanigan were checked + both still have eggs. ^{When} The one nest near the plot was checked, the ♀ became very excited + as I knelt by the ~~nest~~ nest she flushed right in front of my face. I believe it would have been possible to grab her if I had wanted to. There is still only 1 bird present at each nest.

9 July - Both nests checked, and both still contain the 4 eggs. The usual call given by a bird when she first leaves the nest is a short trill which can be likened to the call of a cricket. This call is often given during the first few moments of disturbance, + then the bird turns it into the 'whine', while she stands several feet away.

Holmes, R.
1960

Erolia bairdi

19.

9 July Iktroavik, Alaska

This is the usual procedure at most of the nests I have found, except one. This one (west of the wamigan) will not give the cricket-trill & has never been heard to whine.

10 July - at the nest west of the wamigan, there were 2 birds at the nest, both of which became very excited when the nest was visited. This is the first time that I have seen two birds at this nest.

11 July Barrow, Alaska

The nests near AACs were checked during the afternoon. The one near the road still contains 4 eggs without signs of pipping. Both adults were present & active. The Baird's nest on the N. slope of the B. Ridge also has not begun to pip yet. There was at 1 bird present here. A Pair of Bairds which were quite excited were seen near the L. mound on Pikelka's census Plot. It seems now that the pair association during incubation is poor, in that the non-incubating bird is away from the nest a considerable distance.

Holmes, R.
1960

Erolia bairdi

11 July Barrow, Alaska

s. that he is not noticeable when the nest is checked. Now, it has happened several times recently that both birds have been present. This may be because hatching time is close & both birds are more "aroused & excited"?? Displaying has not been heard for at least 1 week & close to 2 weeks.

14 July Iktroavik, Alaska

The nest west of the warren still contained its 4 eggs & both birds were present. The nest near stolon 0.0 - had 1 wet chick & 2 eggs which were just beginning to pip. Only the ♀ was present there.

16 July Barrow, Alaska

The nest by the road No. 1 HAs was just hatching at 2000. Two young were out & 1 egg was pipping.

17 July - The above nest was hatched completely this morning, & the young were banded. The ♀ of the nest near the NE corner of the plot was still there & was very excited. The young could not be found.

Holmes, R.
1960

Erolia bairdi

21.

18 July Barrow, Alaska

The nest on the north slope of the
Beal Ridge was hatching this
morning. There / The young was
banded. No others were seen
today, except / bird nest /
H/CS. Both birds were present at
the hatching nest & both were doing a distraction display.

19 July - A brood was encountered north /
with. Area among arctic /
pods & low arctic polygons. There were
at least 2 chicks, which were
recently hatched (within a day) &
both adults were present. During
the time I was there, another
adult showed up & all three
were scolding, etc. One of the birds
was doing a strong distraction
display by fluttering over the ground,
rather bounding along.

21 July Ikroavik, Alaska

The nest west of the wanga had 3 eggs,
each of which had a small chick
in it. One egg was broken open &
the embryos were well developed.
The adults were not present,
and the eggs were cold.

Holmes, R.
1960

Erolia bairdi

22.

22 July Barrow, Alaska

A bird (a ♂!) was seen with 2 young near Pt. B.R. (in Central marsh). All three were collected (4765-67). Another juvenile was seen near APCs which was able to fly short distances.

24 July - An adult + 3 chicks seen near the tide station at Eliotich Ross.

25 July - A ♂ with 1 chick was collected just west of Voth's Marsh. Another bird^(single) was seen with 1 chick along Voth's Slough. No displays heard.

26 July - A bird with a chick was seen just north of footprint. None were seen near Ikroovik.

28 July - None were seen in the vicinity of Voth's Area.

29 July - None were seen on the Beaul Ridge, Central Marsh - on the area seen of the ridge.

30 July - None seen in Voth's Area + vicinity.

2 August - One lone ♀ found and collected along Voth's Creek (in the gravel area). Another family group was encountered near Treples II A+B, No. 1 Voth's Area. The adult bird, a ♂, was collected

Holmes, R.
1960

Erolia bairdi

23.

2 August Barrow, Alaska

along with his two chicks. This is about the third time that a ♂ has been found taking care of the chicks. Is it possible that the ♀♀ leave before the chicks are weaned? The chicks with the above-mentioned ♂ were not quite at the stage of flying.

3 August Barrow = So. Barrow, Alaska

None seen during the trip.

9 August Barrow, Alaska

None seen during the past few days. However today, 1 individual (Ad) was seen near trapline X - west of AACs.

14 August None have been seen recently, but 1 juvenile was caught on the beach ridge in a trap & another was picked up today also in a trap.

21 August 1 seen & collected along Family Loop today

25 Aug. 1 seen on the top of the beach ridge.

Holmes, R.
1961

Crocia bairdi

1

3 June Barrow, Alaska

1 heard displaying near the beach ridge.

4 June - 3 seen chasing near Voth's Area & in Britton's Area.

5 June Several noted Between Britton's & Voth's Areas. One courtship display was briefly seen. The display cocked his tail, ^{up spr. - held flat} lowered wing (drooped) - out spread, head held about normal & then ran off the ♀ - who kept on feeding. This was interrupted shortly & both birds flew off.

8 June - Pr. observed S.E. of Britton's Area on the grassy bluffs overlooking Family lagoon. When 1st seen, 1 bird (hereafter referred to as the ♂) was displaying 30' off the ground. After 30 sec. or so, he landed & began to feed. Gradually, he worked his way along an old wheel rut & then suddenly settled into a depression, which apparently will be the nest site. He continued to squirm around, shuttling back & forth, apparently matted down the grass. He would bend down so that his tail & abdomen were up in the air & then would scrape or press down with the lower chest region. The wings were spread slightly but probably just to allow the body full contact with the ground. To begin with he was facing entirely in 1 direction; then he began to turn. He would stand up

Holmes, R.
1961

Erolia bairdi

8 June Barrow, Alaska

turn 90° or so & settle back again with more scraping. In 10 minutes, he made 2-2½ complete circles with 4 or 5 periods of settling in 1 revolution. Also, the feet were used in that they were stamped helping to move the vegetation & sod & they were also used to provide a force for shoving the breast into the cavity. They could be seen from my viewpoint quite well as they moved constantly & helped the bird squirm & settle into the depression.

After this had taken place, the bird stood up ^{in the cup} & began to peck at the vegetation nearby. Both dead debris & dead "attached" grass & sedge were picked & thrown over the breast shoulder (rt & left) into the cavity. After 10-15 picks - he would again stop & settle. This was repeated several times where grass was actually seen in his bill & when he turned over to the side & into the cup. Once, he stepped out of the cup, picked up some grass, threw it back into the cup & stepped back in & continued picking. Finally, stepped out & walked away feeding slowly. Suddenly, another bird landed nearby. The ♂ (1st bird) rocked its tail - in a natural way so that the gray outer rectrices

Holmes, R.
1961

Erolia bairdi

3.

8 June Barrow, Alaska

could be seen & raised his wing - which was away from the ♀ (in a winged position). They both took flight, but due to confusion I was not able to tell who was chasing who.

So apparently nests are made & from my general impression, the ♂ is the one who takes an active part in construction. It is most likely that the site had already been picked & that the casual settling which I saw was not the initial discovery.

Bairds were also checked near ATCS. Several pairs seemed to be present with considerable chasing going on. In one case, 2 ♂♂ were after 1 ♀. There was actual physical contact observed, where the birds lowered their heads, pulled their necks in & charged, this resulting in a fluster fight with wings beating against each other - gamecock like. The ♀ stood by all this & finally both ♂♂ went flying off in a wobbly chase over the tundra. Later - 1 bird went into a partial courtship where he cocked his tail, flared 1 wing away from the ♀, & he followed behind her with both wings held at a 30° angle with the horizontal. The head was held at about a 10° angle above

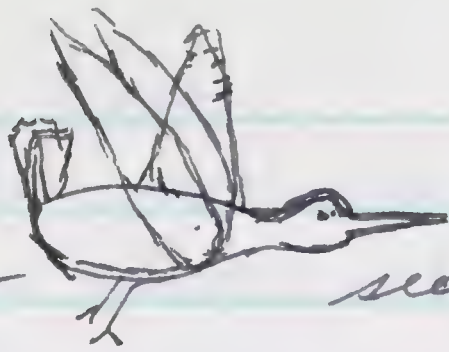
Holmes, R.
1961

Erolia bairdi

24

8 June Barrow, Alaska

The horizontal
only briefly, but
the normal display.



This looked
seemed to be

9 June

- Seen commonly on The Beach Ridge. Many heard
displaying.

10 June

- pr. seen near Britton's area. When the ♂ was
about 1/2" away from the ♀, he raised his
wing away from her (as he turned sideways). Then
he sidled up to her with his wing up & opposite.
When 6" away, the wing was brought
back to normal & the wing toward the ♀ was
flashed. She took no notice & went on
feeding. - The ♂ resumed leading.

11 June

This was the most common sandpiper along the
beach ridge today. Birds were seen
displaying from AHCs & surrounding area to
the south end of Pitelka's Plot. It outnumbered
by far - all other sandpipers - incl. RB + P.S.
One nest was located just east of the road
to AHCs - 6' from the trail toward the ridge & mag
station - see map. - 1 egg - ♀ did
distraction display with tail down & spread,
wings dropped & head put forward.

13 June

Many were heard on the Ikroavik plot & there
had been heard or seen there
previously. One near the wanigan was
persistent & displayed at frequent

Holmes, R
1961

Erolia bairdi

5

13 June Barrow - Ikroavik, Alaska

Intervals. Others were heard further south (see census sheets). - 3 eggs - nest near AACs + ruts - 0800.

15 June Barrow, Alaska.

A ♀ seen feeding - ♂ walked up behind - raised vertical wing to side, cocked tail slightly + walked behind ♀.

No voice could be heard. - Ended in ♀ walking away;

♂ feeding.

There were 4 eggs + nest near ruts, NE of AACs.

17 June Bairdi were active on The Meade ridge - all morning and afternoon.

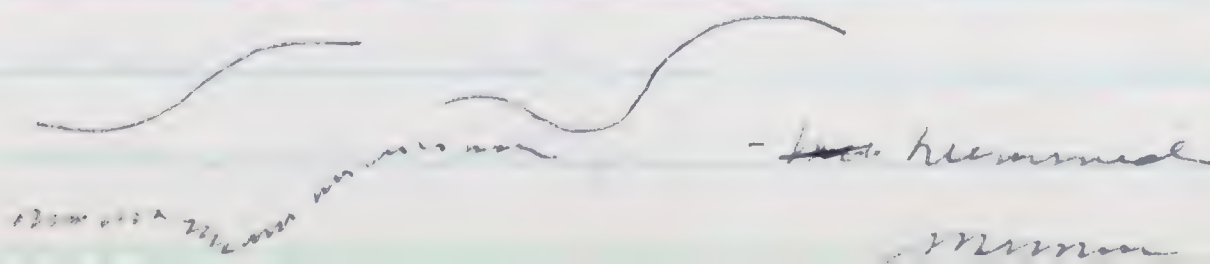
Displays (aerial), + chase were most common. The twang is the loudest + noticeable - apparently species specific.

20 June Several displaying between Britton's + Uth's area. None seen at Ikroavik

24 June Nest at road, N. of AACs - completely missing with no trace - predator - (man?)

26 June Nest found just so. of the curve on the B.R. (beyond the 1st ditch) - with 2 eggs - only 1 bird was present.

4 July 1 pr of excited birds seen near The trapline on Pitelka's Plate. A nest found east of the Uth road with 4 eggs. Disturbance rate as a volume



Holmes, R.
1961

Erolia bairdi

6

6 July Barrow, Alaska

A group of 11 birds seen feeding in the puddles - to the west of the road - opposite the so. end of Fresh Lake. All feeding at edge of water within 15' of each other - no sign of aggression.

9 July

- None seen near ATCS, + 3 were feeding in the wet area - w of Fresh Lake. 2 were on the census plot.

11 July

♀ - still on nest between Voth + Br Hail Area.

13 July

eggs just starting to pip at 1500. Another nest found just behind camp - S of the old ship building + stacks / lumber. - 4 eggs - no sign of pipping.

15 July

♀ still sitting on the nest between V. + B. Area.

16 July

No sign of birds we are mentioned above. Apparently the young have hatched & moved away. At 1930, the nest right behind the lab - contained 4 pipping eggs. 1 adult was present.

21 July

1 Ad + 1 chick collected in the ATCS area. 1 Ad + 1 chick seen near the so. end of Family Lagoon - chick banded.

30 July

2 seen along Fresh Lake.

18 Aug

- None seen recently!!

Erolia bairdi — 1954 — Maher

19 May 1961 —

Maher - Notes - 1954 - Barrow

Baird Sdg. Nests

#1 Found 50. of fresh lake (100 yds SE of
a weather station) in high polygon area.
Eggs pipping on 18 July.

#2 - West side of Britton's area on top
of a high polygon. Found on 22 June
with 4 eggs. On 13 July, nest was
empty, but 4 young were just 20'
away.

#3. - 1 nest near tank farm (NE of airport)
in 6" grass - marea of low polygons -

3 eggs — 30 June
4 " — 5 July

Holmes, R.
1962

Erolia bairdii

29 May BARROW, ALASKA

1 individual seen feeding on the exposed
tundra - west shore of Elson Lagoon - so. of Wohl.
Slough. Gave short trill^{note} - either flourish

30 May - 1 display heard near Voth's area.

1 June 1 bird seen near Elson Lagoon & was
with a flock of ~~Fringilla~~ pectoras & dunn
near Voth area.

5 June 1 bird seen & collected So. of Britton's Area
today. ~~There~~ No other have been seen -
heard recently. Late arrivals?

7 June 2 individuals chasing - 1/2 way between Voth & Britton's
Area. - no display - only aerial flight call - whin-like

9 June 1 bird heard displaying in Britton's Area.

10 June Two individuals doing aerial displays north of
the insect plots. Several displaying at Beacon
of the Beach ridge & along Elson Lagoon - No. of Wohl. fls.

11 June Several display heard & birds seen along the
north side of the beach ridge - and at least
3-4 birds - displaying - N + E of the magnetic
station - i.e. NE of B. ridge curve - 2 collected.

14 June Several birds displaying along beach
ridge & one at Ikroavik (No. end of plot).
When these birds rise to display - they use
a slower - more languid wing beat
which is quite marked - when compared
with normal fast flying flight. Also the
relatively large wings - make this appear

Holmes, R.
1962

Erolia bairdii

3.

19 June Barrow, Alaska

Later, a band was seen to chase a semi-pal as it flew through its tundra - from a low tundra, then - well noted.

22 June Several pairs along beach ridge - So. of middle salt lagoon. This species given more trill - but straight toned + twang, in the air - The straight trill is a musical trill a one & a half tone - but may be broken by brief pause - it was given once for 2 min - 20 sec - with 4 pause -----
This may be preceded or followed by
The dree, dree, dree or it may end with
The twang, trill llllllllll

dree, dree..., llllllllllll llllllll, cheeee, cheeee, cheeee...
llllllllll

dree... - churring

llllll - even-pitched or straight trill

cheeee - twang, trill.

28 June Nest with 4 eggs - on 2nd knoll from Voth area -

♀ gave strong distraction display

Nest with 1 egg - in poorly built nest (small -

more of a lap-sided depression with grass

partly matted down. ♀ (never seen bird -

anyways) gave a strong distraction display

with wings flapping to the side + the

bird giving squealing noise.

Holmes, R.
1962

Erolia bairdi

4

30 June Barrow, Alaska

Nest with 1 egg - now with three - incubating bird left the nest when I was 60' away & gave a strong distraction flight - then a mouse run - did not return close while I looked at the eggs - but stood off from the cubine.

3 July - Group of 4 seen on B.R. - two collected - both showing incubation patches. Since then appeared to be moving as a group - They may be birds - who have had nesting failure.

4 July Both nests E of Dock Area were intact. There was no bird at #3 - but eggs were warm. At nest BS #2 - the incubating bird flew off the nest when I was 60' away - gave a ^{erratic} "injury" flight - flutters over the ground for about 50' - then went into a mouse-run for seven more feet - finally disappeared into a trough - not to be seen - but until I was walking away from the nest & she was standing nearby, giving the cubine.

6 July Baird nest found 30 yards behind orange ARL building by Stevens - yesterday. - contains 4 eggs. Nest site is an exposed gravel road only sparse vegetation [carex] - eggs are lying - a shallow

Holmes, R.
1962

Erolia bairdi

3

6 July Barrow, Alaska

depression which is lined with grass & sedge blades (dry). Some tree-grown sedges partly cover the nest but the eggs are mostly exposed.

As I approached - the ~~♀~~⁽³⁰⁾ incubating bird flew off - and went immediately into a noisy flight, landing 60' away - ran about 2' in rodent run posture - then stopped - stood erect (as I stood by the nest) + gave several whines. wheezy, wheezy. After 2 min - I walked away - it flew + landed in front of me + led me off for 200' - in a partial hunched posture - finally coming back toward the nest.

11 July Nest found by Maher on the gravel south slope of the B.R. - still being incubated. The bird flew off 20' as I approached - then as I came close to the nest - it ran up to the nest in a mouse-run posture - followed by a fluttering in the air to 5' - hovering or rapidly beating wings - giving a loud squeaking call. It would periodically land run around in a hunched posture - give the whine-call. The bird never did get more than 4' away from me while I was on the nest & then as I walked away it flew + fluttered to lead me off.

Holmes, R.
1962

Erolia bairdi

6.

12 July Barrow, Alaska

BS #2 - 4 eggs, 1 bird incubating. It left the nest when I was 20' away flew off in injury flight - bumping on the ground very short & flapping [w/ feet held forward - nest bowl in flying position] - tail fanned - giving

The low, high pitched squeal - which does not seem very species

specific. At 60' - it

stopped went into a hunched posture

gave 2 'darts' & the incubator ran off.

BS-3 - 3 young + 1 egg - 2 birds in attendance; 1 was brooding. As I approach

to 15' - The bird flew out low over the ground, landing 20' from nest - gave two darts & then a number

of whines - & remained in the vicinity - within 60' during the next 4 minutes - but never came close to the nest while I was banding the young.

18 July - One adult + 3 young (< 2 days old) found near Elson Lagoon (Culver Sdg.). Adult 1 Adult seen at first - gave dart - injury flight with high pitched & some squeal & the would stand off or fly around given the whine. The adult came after

Holmes, R.
1962

Erebia bairdi

7.

18 July Barrow, Alaska

about 5 minutes + stood off from
the dirt. {bird in attendance
also far occasional dirt -}.

Nest near magnetic station - south side/
'dirt ridge' - gravel - apparently hatched with
the last three days. This was located
in almost pure gravel with some few
scattered. The cup was in gravel lined
by the white fiber-like lichen.

20 July Nest #2 checked in the afternoon - all four eggs
were present. The incubating bird was off
the nest when I arrived there.

21 July Nest #2 checked & only 1 young was present -
the other have apparently hatched & were
somewhere in the vicinity. Both adults were
present - one gave a strong injury display -
the other stood off giving the drum-note -
acting excited as I did so.

incubation
period
Since this method 2 eggs - the evening of
30 June + the 4th egg was probably laid the
morning of 1 July - The incubation period is
20 days (19-20).

3 Aug None have been seen during the last two
weeks. Where are the young? - not to
mention the adults.

4 Aug Meellen collected 4 near Fresh Lake
(Adults!).

Holmes, R.
1962

Evotia bairdi

6 Aug. Barrow, Alaska

None seen today. No adults + young of this species seem to have disappeared. A few young have shown up during the last several days - but the adults presumably have moved out.

9 Aug Peters Lake, Alaska

One seen in the alluvial fan between Lakes Peters + Schrader.

19 Aug Barrow, Alaska

None seen toward the point + none have been seen since the early part of the month.

Holmes, R.
1963

Calidris bairdii

27 May Barrow, Alaska

One seen & collected on north shore of ~~Wohlschlag~~ Wohlshlag - in company with a ♀ Pectoral.

28 May Two seen in drum area - between row of drums & road to Ares. The two were on an open patch of tundra - suddenly one ran at the other, jumped on its back & stood there for sev. sec. - pecking with its bill around the head of the bird underneath. The wings of the bird on top were at 75° & fluttering, tail was raised to about 45° . Suddenly, the low bird booted off the upper, raised one wing & tail & then turned & jumped on the back of the other & the same process was repeated. They exchanged position 4 or 5x - each time, the bird on top appeared to be pecking at the neck or head of the lower bird. The lower bird also would depress its tail & fan it slightly. After these exchanges, both birds took flight - keeping parallel & level with each other, each giving the full note - each periodically setting its wings at 45° & gliding for sev. seconds, then resuming the fast flight. They moved off to the south ^{300 yds} & then both to the same area. They landed 200 yards apart, each on open tundra & began feeding. Later - 2 indiv. were seen feeding near each other in the same area - same 2 indiv. ? - Prob.

Holmes, O?
1963

C. bairdii

2.

28 May Barrow, Alaska

2♂♂ which have not settled boundaries - but have claimed this area & exposed tundra. The amount / aerial displaying was limited & this one dual-flight.

29 May One collected - feeding by jets & pecks on Elson bluffs, 200 yds south of oohpik.

Two seen feeding together along Elson bluffs.

30 May One seen & heard in aerial display over Voh area. Calceat site

2 June Drum area. 3-4 birds - 3 seen in one chase, amid chattering, sounds & trills. One aerial display heard.

see below
An individual when landing kept his right wing held vertically, while he gave the musical, soft even pitched trill (10 sec). He then lowered the wing & began feeding. This happened 4 times, each was preceded by a short flight from one exposed polygamy to another. No other bird was seen in the vicinity.

Several minutes later, he flew to a mound 100' away, landed, kept 1 wing up as before, but cocked tail, gave a harsh, uneven chatter or trill for 5 sec - the 5 sec of even, musical trill - as he walked toward another individual (♀?). Still turned & walked away, he followed with tail still cocked, but



C. bairdii

2 June Barrow, Alaska

with both wings raised, giving both call
(tail) notes. ^{+ clucking quietly} They both flew to the next
polygon. He continued with the tail coiled,
one wing up. Then lowered the wing & began
flicking (or at least flicking motions) &
kept tail raised; finally lowered tail
& both birds fed. This probably was a counters
act - with me & showed no response at this time.
call notes - here

- 1) high-pitched, aerial churring note (drr drr)
was given when he had both wings
in air (vertical) + following below
♀ (sometimes ^{given slowly} with double inflection - dā-rē,
- 2) low-pitched, musical trill - given by
a ♂ when alone + inflection is
part of the aerial song + in these
"courtship" postures -----
- 3) harsh, uneven, trill - given in
chase or on the ground as part
of the ground "courtship" activity
- 4) in air - a song - a uneven,
twangy trill - zhr zhr zhr
zhr zhr zhr

Several chases seen - call note given was usually 2, more likely two or three notes. actual may be different parts than the sound - Chorus was more heard in chase.

Holmes, R.
1963

C. bairdii

4 June Barrow, Alaska

Two in drum area near explosives shed - one displaying - others were birds perched. Two were displaying at the same time just north of AACCS - also some chasing going on there.

6 June - One flying along Village House bluff, one heard in Voth Area - BS seem to be quite uncommon this year - at least so far - they may be hard to come by.

8 June One displaying on beach ridge near magnetic station - lashed me another keeping wings at vertical for 1 sec before lowering them.

One displaying near Tropics II A-D.

9 June Hunted AACCS & beach ridge for one today - but had difficulty locating them - one displaying just north of AACCS - & one south (on north side of S.R.) - 2 chasing about 300 yds west of magnetic station (1 corr.) - these seem relatively scarce so far - however much of the habitat north of the beach ridge is not yet free of snow?

One collected near AACCS - one other seen in the same area.

10 June One + possibly two heard in Britton's Area (high polygons at north end).

Holmes, R.
1963

C. bairdii

5.

11 June Barrow, Alaska

One heard from beach ridge - 2 displays
& chasing - gasline ridge.
At least 2 displays - beach ridge
in afternoon.

12 June At least 3 pair west / APCs see census
sheet. Frequent / churring note.
13 notes in 15 sec.

15 June Many displays - songs heard along gasline
ridge. (at least 3 birds).

16 June Good activity along north beach ridge -
one pair collected - ♀ had enlarged ova -
but brood patches were well developed &
she was moulting - body feathers - on
all major feather tracts. - looked as if
she may have had an earlier clutch &
lost it somehow - then started to
molt. - Perhaps encountered her
mate (since ♂ did not have a
developed brood patch - i.e. this was
probably his first time).

For other larks collected - both ♂♂ & ♀
The churring note (Mr. Baird's ♀ is
best described as a nasal & emphatic
pronounced "prit" (the "ē" is emphatic)
One heard in the ground - raised one every
to the vertical - as he found an occasion
to intrude - this bird was flushed

RTH
1963

C. bairdii

16 June Barrow, Alaska

to the side - perhaps - the encounter then
could still take place if the wing
display (?). The bird then went into
an aerial display itself & chased
the other bird.

17 June - Another molting ♀ - who was
starting to lay eggs. Her incubation
patches were well developed & looked as
if they had been in use previously. No
sign of old coll. follicles could be found.

20 June Several displaying over ASCS. A nest
was located - on ~~the~~ north side of
beach - up - due south of ASCS -
with 2 eggs & a tentative brood
which flew up in a fluttering way &
flew around in the proximity
to the nest as I looked at it -
it gave the obvious note typical
of C. bairdii at the nest.

21 June One heard a census plot at Ikroavik (near
South end).

22 June ♂♂ raised one wing to vertical (slight droop at
tip), cocked tail (at least partly) & gave even
bill - when disturbed by me or one
or jaeger. This is also done when
another BS is nearby & may lead into
pre-emptory display.

RTH
1963

C. bairdii

22 June Barrow, Alaska

The species seem to be quite common
+ beach ridge, with low - garden ridge
area toward the coast. They outnumber
semi-pals by at least 3 to 1.

25 June 1 seen + collected on garden road. 300 yds
north of Footprint lake.

28 June Several pairs noted in AACS area - little
display - may be due to heavy winds.
2 collected - some molt young.

Nest #2 - was taken by Mr + Mrs. L. Stribling - eggs collected from Stribling. - Nest #2

The adult was shot by Mueller.

1 July Near beach - garden ridge

4 July 1 found dead by K.K. Bohmstedt in drum
area. - Bird was full - but no evident
sign of damage - she also was laying egg.

5 July Group of 4 *bairdii* in ~~the~~ Britton's Area - 1 coll.
no aerial display activity.

8 July Collected three breeding birds from
AACS - no display activity - except
one bird raised - wing towards me
as I approached.

A nest located this a.m. -
Beach ridge census plot - with 4
eggs - see census sheets.

10 July 2-3 pairs in north-west end of garden ridge -
no display - 2 collected. Nest in Dr. - in back.

Holmes, R.
1963

L. bairdi

12 July Barrow, Alaska

A pair was collected a west shore /
Voth creek - probably a nest somewhere
in vicinity. The nest in ~~Britt's~~ Britt's
area was still being incubated.

14 July Beach ridge census plot - 1 nest (near 18-C) - hatched
July # 12-13 - gone today. Same was true of nest
near 16 - except that two cold eggs remained
in the nest cup.

16 July Nest H3 - in Britt's area had 3 young just
out of the egg & 1 egg which had not yet
peeped. The other egg shells were gone - 1
adult was incubating.

17 July One adult with 1 downy chick collected
near APCS. All nests - ⁶ plot have
hatched - some adults & probably
their chicks are in the air still.

Nest near 16-C - which had 2 cold
eggs last check - still had them today.
When checked - one had a chick about
ready to hatch & the other was
sterile - no development whatever.
ever. I have no idea why the one
didn't survive - unless there was
some bad sperm effect.

19 July 1 collected in Britt's area in full winter
body plumage. 3 collected along b. r. near
beaver on arbutus - all had molted - all

not chel - eggs - I believe - (it was frozen)

Holmes
1963

C. bairdii

21 July Barrow, Alaska

Two birds on beach ridge - close by -
both giving wheezy note - thought of
the pair - but when collected, both
were ♂♂. No chicks noted.

22 July One seen on gasline ridge - one well over
juv. caught in snare traps.

24 July 1 flying juv - collected along beach
ridge - west of magnetic station.

25 July 1 ad. collected under arm behind lab.

29 July 1 flying young by itself - near Bridge - N.E.
1 north salt lagoon - collected

15 Aug - 1 juv - caught in traps near AAC

18 Aug 1 juv along Fresh Lake

Holmes, R.T.
1964

C. borealis

4 June Barrow, Alaska

Several in drum area + near AACs - no aerial
churning heard but several chases noted.
In chase, a brief note is given which is
high pitched then aggressive + which occurs
between the twanged tail in this context.

7 June 1 in BR, north of Pitelka's Plot. In drum area - several
displays. In display flight - they wave
here - but also have a flagging
flight - with the wing moving
30° above + below the horizontal - as
the whole gives the pre, pre, + the
as they land - wings are set in V
+ they give a steady - pitched trill.

8 June Display flights ^{common} over area between BR + Smith's park
Upon landing both wings held up for an
instant + then folded - not as pronounced
as the Dunlin landing display.

10 June Several displaying in area to east of AACs -
1 chased by 1 WR. Several noted north + west
of AACs. Two were encountered near 8:01 PM
rather - most aggressive (9 or 10?) - ^{given the due-ooo} Suddenly
one bird (the ^{later} aggressive + presumed ♂) - landed +
fanned his tail, hunched his back, ruffled the
back feathers + capulars - ^{Wings normal} - ran forward. Other (♀?)
as he approached he, one wing (pointing to the
side) shot up vertically + ^{then lowered} head raised slightly -
the other ran in front of him - with tail

RTH
1964

C. bairdii

2.

10 June Barrow, Alaska

still depressed & fanned + hunched the side of his -
flashing the rump



are towards his -

The back feathers
still ruffled. ^{no vocalization} This happened twice.

These postures, somewhat have appeared in the past
to be aggressive - but in both cases the
birds stayed together + 5 minutes later -
a nest with 4 eggs was found 25' E of
Stake 8.0. So, this is most likely a

pair - which has just finished its nest -
The hunched posture - maybe a courtship -
parade display - all this still needs
checking.

11 June

Several displays in No. 1 R. area - at 150', 100', 120' ±
- high flying - flapping flight - occasional glide
on outstretched, slightly drooped wings - &
near landing in V-set wings.

Checked nest - still had 4 eggs - bird in
nest - gave strong distr. display - &
hunched posture, tail lowered & spread, wings
drooped, back feathers ruffled - moved
shuffling off through the grass given a
varied squeaky call - later when about
100' from nest - gave do-wit (what's that?)
call from an alert upright posture. The
bird - tucked in the head - maybe the R?

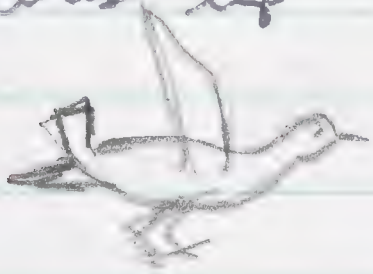
Holmes, R.
1964

C. bairdii

3.

11 June Barrow, Alaska

Bird displayed low (15') with floppy flight, then gliding on down-curved, non-beating wing - gave brief + lunched - keeping wing up near vertical + then raised tail to 90°, gave a 3 sec tail-lateral wing (which had been the rest) + then raised the ~~right~~^{left} (the right was put into place before the other was lifted) - each in an about 4 sec - tail still arched - the bird in a horizontal posture but head was up. When it flew over in display, the bird raised both wings to vertical + gave a rapid tail note - the lower body was still in resting position.



Later 5 birds involved in a chase, moved high (100-150') circling together - 10' apart at most - 2 moved off together - both flapping, low display - another then pulled off + displayed - while the 2 remaining went out 1 left. Territorial boundaries seem indistinct at this season - at least when chase begins they all join in + cross boundaries - cutting together - finally to move off. Whether or not any of these involved in the encounter; all birds involved seemed to know.

Holmes, R.
1964

C. bairdii

4

12 June Barrow, Alaska

Display at 200+', 75', 100', 250+' - call (sing) oft
starts with a series of 4 or 5 sharp, short
thunder notes - followed by several run
together - not quite as sharp as the
the twangy trill

art, art, art, dee-dee-dee eeeee
- call note when disturbed is a version of the
introductory note - a sharp "bdrnt, bdrnt,..."

Display landed - folded wings - then
as another bird flew by about 20'
away, the bird on the ground first
raised one wing & then the other & then
both were up & also the tail was cocked
to 90° - gave full note & then resumed
feeding.


Later - 2 seen near AACS - 1st beh.
similar to that described for the pair near the helicopters
(at nest #1) - the approach was in a
upright posture. Tail was depressed & partially
fanned - the first wing was at neutral -
the body - or kept body down & & even
folded tail toward her as she moved
slowly off to the side & then shuffled around
in front of her again. She paid no
attention & resumed feeding.



Holmes, R.
1964

C. bairdii

13 June Barrow, Alaska

Sev. pairs in drum area - 1 chase noted involving 4 indiv. - covering the entire drum area - apparently are a chase in type - terr. boundaries are not held too very strictly & several \rightarrow from adjacent areas join the chase - eventually all separate out & return to their respective territories & chase - the juv. the after-noon drift, ... or version thereof & occurs part of the drum out fall (especially when they set their wings - a wide  & glide).

17 June

Pair on south side of head ridge near 4 barrels. σ chased ϕ - giving long trill. - landed on south slope of ridge. σ raised tail (to about 60°) - walked to a nut up in - kept it grass & began displaying - tail high - wagged to & fro - as he rotated in air - ϕ standing about 1 foot away Σ the juv. the long trill - which varied in loudness &/or pitch] - ϕ walked to him - but she flew - the σ following given the trill - then went into aerial flight - with short trill note (dree) given repeatedly. [in air σ lifted one wing vertically - while still in display posture - as ϕ approached. - He stayed out - with tail at 60° - 1 wing up - then both flew].

RTT
1964

C. bairdii

6.

- 18 June Barrow, Alaska
Monks (later of chase involving 2♂ + 1♀ near
Nest #1. - ♀ + 1♂ were pinning, coo - it call + on
♂ arrived - 1st + 2nd 1 was not hit from
re-traced him [see photo] - taking flight -
eventual chase involving all 3 birds. - red pin
during chase.
- 22 June Nest with 4 eggs found in drum area. taken
for egg weights.
- 23 June Nest with 4 eggs - on south slope of beach
near - 30 yds N. of meadow lake - a lagoon -
moss. patch of tundra - well formed
by grass-sedge material. No display
activity on b.r. near gasoline.
- 26 June Display declining rapidly - only 1 aerial
flight flight heard accompanying song, be -
today + all day was spent on either beach
or gasoline ridge.
- 27 June Only 2-3 display heard - at times even
all heard - no high flying - extended
aerial flights.
- 28 June 3 display heard during entire day. - little
aerial activity.
- 1 July Flock of 4 + 1 WR on N. BR near 4 drums.
Nest on South slope of BR, N. of meadow lake
steel water.

Holmes, R.
1959

Erolia melanotos

6 June Barrow, Alaska.

2 of this species seen in the Voth Area in company with several Red-b. Sdp. 1 was collected.

8 June Barrow, Alaska

3 seen $\frac{1}{2}$ mi so. Barrow Village. They were feeding among a flock of E. alpina on a few large areas of exposed tundra. One was collected.

12 June Barrow, Alaska

One ♂ and 1 ♀ seen ^(so. of) near Voth's Area. They did not appear to be paired yet, for the ♂ was seen by itself at first and then the ♀ was noted several hundred yards away. The male flew over her with his throat distended and giving a kuk-kuk-kuk... call. He then alighted 30 yards away on a tussock. The ♀ then flew about 30 yards and alighted and continued feeding. The ♂ made another circle around her and alighted again about 30 yards from her. The ♀ seemed to pay no attention to the male. The ♀ was collected, and

Holmes, R.
1959

Erolia melanotos

2

12 June Barrow, Alaska

her largest ova was 5mm in diameter.

14 June Barrow, Alaska

Upon returning to the above mentioned area where the ♀ was collected, it was found that the ♂ was still present. It had not acquired a new mate yet, but was seen to chase off 2 saps (sp?) and 2 latroctores and 2 Dunlins. Apparently his territory is fairly well staked out.

15 June Barrow, Alaska

One male seen along the gas well road. It did not seem to be the same as the bird seen on 12 & 14 June, however we were not in the same locality.

16 June Barrow, Alaska

Several pairs and a few individuals were seen in and near Voth's Area. The ♂ mentioned previously was seen defending his territory against a pair which had intruded. This involved the ♂ of the pair chasing his ♀ and then this other ♂ chasing both of these birds. The chase consisted of flying low over the ground (not over 10-15 feet)

Holmes, R.
1959

Erolia melanotos

3.

16 June Barrow, Alaska

and banking and swooping as they went. The territorial ♂ would stop after he went so far and would return to one of his "perching" areas. As he returned, ~~it~~^{he} used a shallow, almost fluttering-flight and gave a series of 6-8 hoating notes. As these were given the chest was bulged out and then retracted and so on. This flight was about 60 feet off the ground. The landing display was not noted. Later when the original pair was watched, the ♂ was seen walking about 6 inches behind the ♀, with his tail cocked and chest expanded. No vocal accompaniment was heard, but it may have been covered up by the rather strong wind which was blowing. After following the ♀ for several feet, both birds took flight and a low altitude chase continued around the area until finally the birds settled again. Another threesome was noted along the gas well road at the SW corner of the salt water lagoon. Two ♂♂ were seen fighting, as they were chasing each

Holmes, R.
1959

Erolia melanotos

16 June Barrow, Alaska

other over the tundra while the ♀ fed in some tall grass. Upon the surrounding of the ♀, both males came down to her side and both attempted to mount her. One bird kept driving the other off and finally succeeded to copulate 2 or 3 times. Then both males took flight and a chase ensued. After several seconds, both birds returned to the ♀ who continued to flap around, and fought each other by her side. One ♂ was seen to display as he came in. This chasing and returning continued for 2 or 3 minutes and then all 3 birds flew off.

18 June Barrow, Alaska

Several ♂♂ seen behind the drum area and along the beach ridge. They are seen sitting on top of mounds or ridges where they presumably can see any other birds entering their territory. As they fly, the breast is expanded making the bird very conspicuous. Also a hooting noise accompanies this flight which is low (less than 20 feet).

23 June Barrow, Alaska

The males are still holding their territories

and can be seen and heard frequently. One male behind the drum area was heard to give a gurgle-type call which seems to be the warning note. When another male entered his territory, both birds flew side by side, both giving their aerial display. Three birds (all ♂) were seen in the grassy area just north of Wohlseh's Slough. One bird^(A) flew to the west and encountered bird B. These two flew about 40 feet giving their booming call. Then A flew back to the ~~west~~^{east} and encountered Bird C. These two proceeded in the flight display until A turned back toward B and the whole thing started over again.

24 June, Barrow, Alaska

One male seen chasing two Baird's Sand-pipers away from a small grassy area alongside a pond. These two peeps had been fighting (or courting?) - wing displays toward each other and lower call) as the ♂ dove toward them, uttering his hoarse gurgle. The two birds immediately took flight and moved about a hundred yards away. The male chased them for about 20 yards and then returned to a mound where he settled.

Holmes, R.
1955

6.

Erulia melanotos

25 June Barrow, Alaska

Several territorial males seen near and on the east census plots and in the area between there and Wohlshlog's Slough. A group of 7 males was seen along the northern edge of Central Marsh and groups of 2 and 3 were seen throughout the tundra. Apparently these birds have deserted their territories and are beginning their flocking. Three males were collected today to enable us to study the anatomy related to the chest inflation. These were examined and it was found that there are two air sacs which extend up the neck to the base of the skull. These are separated by a septum and each side could be blown up separately. When air was forced into the trachea it seemed that it went directly to the lungs or other air sacs posteriorly then it seemed to move forward toward the neck sacs. Upon injecting ink into one of the sacs it seemed that the connecting canal may go through the breast muscles into the body cavity. The skin in the neck region is very cor.

25 June, Barrow, Alaska

- Boggy and when examined internally it was heavily vascularized and was fairly heavily covered with fat. This layer of fat and vascularized tissue ended at the starting of the breast region. The back of the neck was not so characterized, so it seems that just the expandable area has this type of tissue.

26 June, Barrow, Alaska

Several groups of 2 and 3 males seen today, also several territorial males. These males which are in groups act differently from the territorial males. They do not utilize the mounds as observation posts, and they spend most of their time feeding.

28 June, Barrow, Alaska

Several groups of males seen. 9 were in one flock S.W. of AACS and groups of 2-3 were seen in the same area. Two territorial birds were noted displaying and chasing.

1 July, Barrow, Alaska

One female seen near gas line ridge.

Holmes, R.
1959

Erolia melanotos

8

6 July

Barrow, Alaska

A group of seven males seen in Central Marsh. They were all feeding within 5 yards of each other. No others were seen during the morning. Four males were seen in the small ponds just west of freshwater lagoon. They were feeding and showed no aggressive actions. There was no evidence of the bulging throat of the breeding season in these birds. A nest was located west of the gasoline and west of AAC's buildings. It was about half way between the gasoline and the middle saltwater lagoon. The nest was in among tall grass on a dry sloping "hill". It was almost impossible to see the nest, because the grass overhangs so. The three eggs were light green with large brown spots. The eggs were noticeably larger than the Baird's Sandpiper egg. When the female was flushed, she performed a distraction display very similar to the Baird's. The back was hunched, tail dropped and spread, and the

Holmes, R
1959

Erolia melanotos

9.

6 July Barrow, Alaska

wings were slightly drooping. The male given two also a whining note similar again to the Baird. She did not go far ^(20 feet) before she assumed the normal natural position. After my retreat from the vicinity of the nest, she winned. Worked her way back there and began to sit again. No male was seen in the vicinity of the nest.

7 July Barrow, Alaska

The nest was checked at 1200 and still contained three eggs. The female was not incubating, but she arrived when I was at the nest. She kept her distance (40-50 feet), but gave a long series of soft "chig" notes. Not one male was seen during the morning along the beach ridges near Wohlsehlog Slough and the east census area or places in between. One male was seen feeding in the drum area at 1630.

8 July Barrow, Alaska

Several flocks were seen in

Holmes, R.
1959

10

Erolia melanotos

8 July Barrow, Alaska

and near Voth's Area. One contained 17 males, another 6, and several other small and scattered groups. They appeared to spend most of the time feeding and when flushed would all fly in a group. One male was heard giving the duddy call (F.A.P.) near trapline IV-B.

12 July Barrow, Alaska

Four were seen just east of Voth's Area. Apparently they were all males; their air sacs have diminished and the dark coloration has changed to a light brown in the chest regions. Three of these were collected by Pitelka. Two were females which apparently had just laid and one was a male. The ♀♀ had heavy fat and were molting.

13 July Barrow, Alaska

The nest was checked at 1400. As I approached, the female sat very low so that the tall grass and sedge concealed her. When about 2 feet away, she fluttered off and did a very vigorous distraction display.

Holmes, R.
1967

Erolia melanotos

27.

12 July Barrow, Alaska

This consisted of fluttering along the ground with tail down and fanned. The wings were only drooping slightly. A trumbling-crying note was given as she huddled her way over the tundra. Every few feet she would look back to see if I was following. When she resumed her normal posture she was about 30 feet from the nest. The eggs (3) were still present.

14 July Barrow, Alaska

One flock of about 15 males seen South of Voth's Area. A few single females were seen just S. of Footprint Lake.

15 July Barrow, Alaska

Several small groups seen between Voth's Area and Footprint Lake. A few females were noted at the south end of Footprint Lake.

16 July Barrow, Alaska

Three seen near Wohlseh's Slough; apparently they were males?

17 July Barrow, Alaska

None seen on Beach Ridge or near AAC5.

18 July Barrow, Alaska

Several groups of 10-15 were noted on the flat "plain" north of Footprint

Holmes, R.
1959

Erolia melanotos

12.

18 July Barrow, Alaska

Lake and also on the lower end of the lake bottom. These are the first birds that I have seen inhabiting the drained lake. They were feeding in the flooded areas and were seen in the afternoon and evening. Several lone females were seen south of the lake and two broods were seen and banded (one of 4, one of 2). The nest near AACS hatched late yesterday or early this morning. Two of the young were found about 20 feet away from the nest site. There was no destruction display by the female, but she became very excited.

19 July Barrow, Alaska

Three groups of males were again seen in the same locations along the gasline road. There appeared to be more in the lake bed, as groups were flushed more frequently from the tall grass.

20 July Barrow, Alaska

One large group was observed at the south end of Footprint Lake at 1100. It contained about 60-70 birds which were feeding among the flooded patches of grass. Two

Holmes, R.
1955

Erolia melanotos

20 July Barrow, Alaska

were collected which proved to be females. A few other scattered groups of 2 and 3 were seen. The shorebird activity is quite low at the present time which makes these pectorals appear to be the most abundant. The liquid, gurgly like note is quite distinctive in identification.

22 July Barrow, Alaska

A large flock was again present in the southern half of Footprint Lake. It consisted of 50-55 birds which were feeding among the large rocks / water. When flushed they would all fly together in a flock and then land several hundred yards away. Two birds were collected and both were males with heavy fat. One was molting. Other small groups were also noted just S. of John's Area and on the grassy flat area west of Footprint Lake near Jugger nest #3.

23 July Barrow, Alaska

Small flocks were encountered just no. of Footprint Lake and in the southern part of the lake. The big flock of the last few days was not observed as such.

Holmes, R.
1959

Erilia melanotos

24 July Barrow, Alaska

Several groups of 2 and 3 seen in and near Voth's Area. Otherwise very little activity was noted. Only two or three broods of this sandpiper have been seen, even though the time spent looking for them has been considerable.

25 July Wainwright, Alaska

Two seen near the village between 1230 and 1800.

27 July Barrow, Alaska

Three seen So. of Voth's Area.

28 July Pitt Point, Alaska

About 6 were seen during 6 ^{hours} ~~minutes~~ spent in observation.

29 July Barrow, Alaska

A flock of 25 were seen on So. Footprint Lake. This was the only location they were seen at during the whole day.

30 July Barrow, Alaska

Two were seen in Voth's Area. Apparently the males have all departed, and just the females now remain. No young have been seen since 18 July. Most of the remaining birds seem to stay on Footprint Lake or other areas when there is standing water.

Holmes, R.
1959

Erolia melanotos

15.

31 July Barrow, Alaska

No pectorals were seen during the trips to Wohlseh's Slough 2, Elm Lagoon and the Beach Ridge.

1 August Barrow, Alaska

Two birds seen; 1 collected which was a molting female. There were none of this species in Footprint Lake - where previously they could always be found. No young ones have been seen for almost two weeks.

4 August Barrow, Alaska

A flock of 40 was present on the S. part of Footprint Lake. Only two birds were collected. They were both females which were molting (both). No young birds were seen.

5 August Barrow, Alaska

A flock of 30 were present just S. of Freshwater Lagoon. One bird was collected, and it was a female. A group of 6 were seen out along the spit towards Nunavut.

6 August Barrow, Alaska

Large groups of females were present in Footprint Lake.

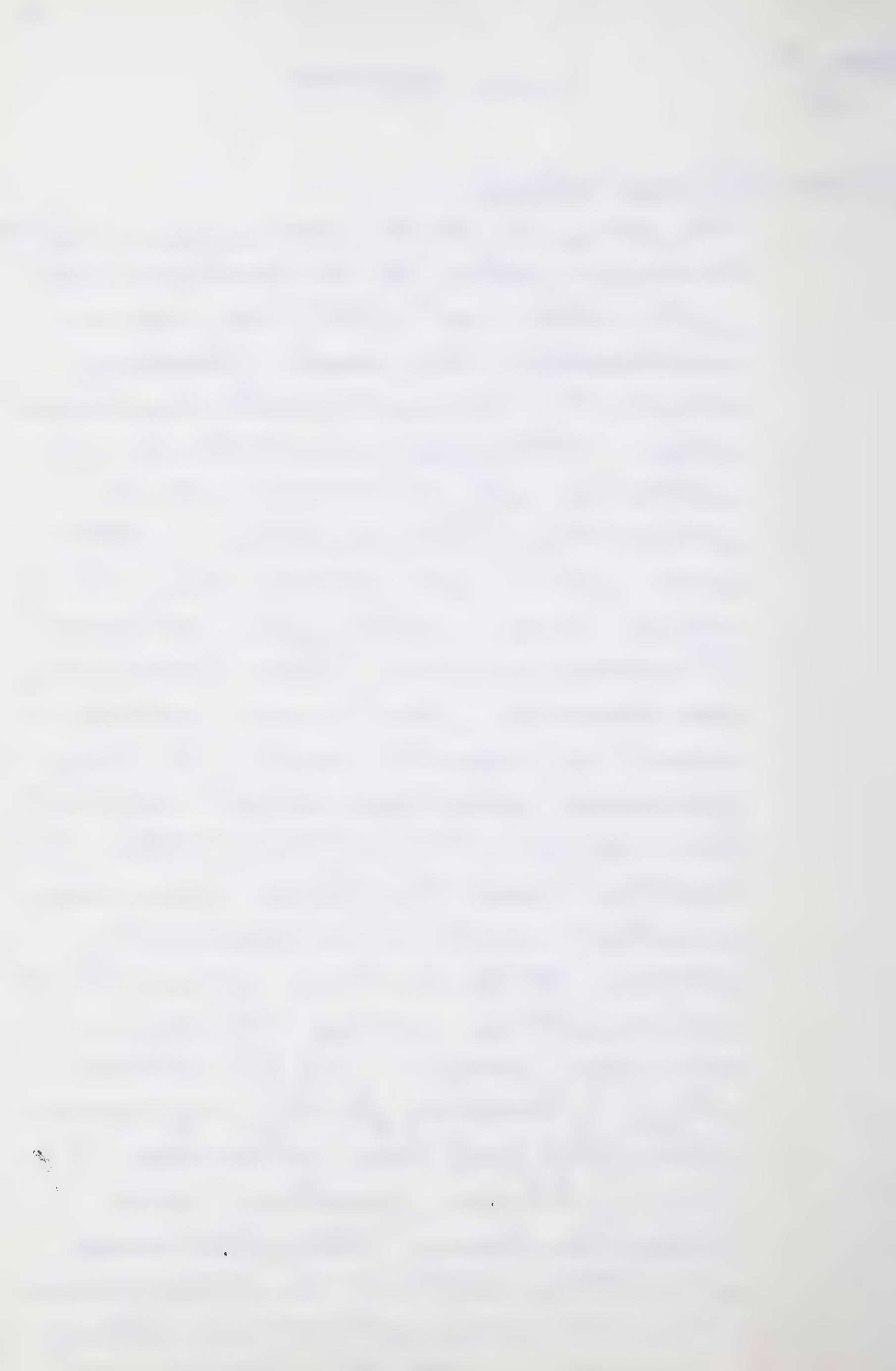
Holmes, R.
1959

Erolia melanotos

16.

7 August Barrow, Alaska

The groups of birds were more carefully censused today. In the northern half of the lake at 1400, there was an estimated 600 birds feeding among the small pools and marsh areas. This figure was attained by standing along the shore and estimating the population. Also as a shot was fired the flying birds were estimated at approx. the same number. These birds were very common, but were almost equal in number with the Semipalmated Sandpipers which had not been seen for almost two weeks. The southern half of the lake was also checked and censused with approx. 400 birds being present. Of course there may be some overlap caused by the birds flying back & forth, especially after they had been flushed. A group of 40 was watched for about an hour. Many of the birds were taking baths in the deeper pools. This was accomplished by standing in water up to the birds' bellies.



Holmes, R.
1954

Erolia melanotos

7 August Barrow, Alaska

and then shaking vigorously, allowing the water to reach various parts of the body. Afterwards, the birds would stand and preen for several minutes. Occasionally, as the birds were feeding in the shallow water or on the exposed mud, one bird would supplant another. This was observed several times, but did not appear to apply to any particular patch of ground, for the supplanting bird would move a few feet away and repeat the performance and then keep on moving. The supplanting action was accomplished by lowering the head and chasing the intruder for one to two feet, and then feeding was resumed. The supplanter was shot at for the purpose of sex determination, but unfortunately escaped. Other birds present (incl. the supplanter) all seemed to be females.

9 August Barrow, Alaska

Many scattered individuals, all apparently females were seen during

Holmes, R.
1959

Erolia melanotos

9 August Barrow, Alaska

The late afternoon on Footprint Lake.

11 August Pitt Point, Alaska

About 10 individuals were seen here during the morning and afternoon. Three became excited - as if they might have young nearby. No young birds were seen, however.

13 August Pitt Point, Alaska

The weather seems to have curtailed most of the bird activity yesterday and today. No pectorals were seen either day.

15 August Pitt Point, Alaska

Two noted about 1 mi east of base. No others have been noted. These two did not appear to be immatures but were probably ♀♀.

18 August Barrow, Alaska

Four individuals were seen between AKC and the Beach Ridge. These were apparently immatures.

19 August Barrow, Alaska

Footprint Lake was visited, and very few pectorals were noted. Among the 300 (±) Red-bellies only two immatures were seen. Three others were present just north of the lake.

Holmes, R.
1959

Erolia melanotos

20 July Barrow, Alaska

Three immatures were present on Gas line ridge during the evening. Otherwise, none were seen between there and ARL.

21 July Barrow, Alaska

From Voth's Area to the northern edge of Footprint Lake, 6 birds were seen. These all appeared to be juveniles. One was seen among the large number of Red-tails on the lake bottom.

22 July Barrow, Alaska

One seen near A.A.C.S. and 2 on Gas line ridge.

23 July Barrow, Alaska

Four immatures rook in Arctae Marsh and two near A.A.C.S. Very few of these birds are now present, and apparently those that are, are immatures. The best places to locate them are among wet marshy places where the grass and sedge are relatively tall. Most of these birds still have the habit of creeping through the grass before they will flush. None of the birds seen or collared recently have

Holmes, R.
1959

Erolia melanotos

23 July Barrow, Alaska

had my natal down.

24 July Barrow, Alaska

Four seen on the east side of
the beach ridge.

25 August Barrow, Alaska

Several individuals were seen
in Central Marsh and one
flock of 9 was noted. They
all are immatures.

26 August Barrow, Alaska

18 individuals were seen
in Central Marsh & at the
same time a flock of 7
was seen. Three birds were
collected from this flock
and one even male
(immature). The buff color
is now rather evident in
these birds. Small groups
(3-5) were seen just no.
of Footprint Lake, and several
individuals were seen on the
lake bottom. An estimated
75 birds were seen today in
6 hours spent in the field.

27 August Barrow, Alaska

Several small flocks (2-10) were

Holmes, R.
1959

Erolia melanotos

21.

27 August Barrow, Alaska

seen east of the beach ridge among the low wet areas adjacent to Elson Lagoon. Individuals were seen here and there in this same locality, and three birds were seen in Central Marsh.

28 August Barrow, Alaska

Four groups of 6-8 seen between Voth's Area and the area west of Footprint Lake. None were seen in the lake bottom. Two were seen together in Voth's Area during the evening.

29 August Barrow, Alaska

Two seen north of Voth's Area in the morning, and three noted in the same area during the evening.

30 August Barrow, Alaska

None seen during the morning, but one seen in Voth's Area in the evening.

31 August Barrow, Alaska

Two seen in Voth's Area. One seen just north of Footprint Lake (collected), and one seen during the evening just north of Voth's Area (collected). All were immatures.

Holmes, R.
1959

Erolia melanotos

22

2 Sept. Barrow, Alaska

Two seen just north of Voth's Area.
They were feeding among several small
ponds.

3 Sept. Barrow, Alaska

One seen in Voth's Area feeding
in the troughs between the high polygons.

5 Sept. Barrow, Alaska

None seen. (No shorebirds seen
anywhere). The ponds all seem
to be frozen.

Holmes, R.
1960

"Erolia melanotos"

28 May Barrow, Alaska

Three individuals were seen along the edge of Elson Lagoon near Wohlsehlog slough. Two were males (1 collected had 2 mm testes) and 1 was a ♀ (largest ovum 4 mm). Four birds were reported by Mads in this same general location during the afternoon.

29 May Barrow, Alaska

Two males with slightly inflated throats were seen near Elson Lagoon in the same vicinity as the two collected yesterday. Both birds stayed together & moved from place to another feeding. When they flew, the neck region would sag down giving the sac like appearance - even though it was not fully inflated. . .

30 May Barrow, Alaska

10 were seen north of Wohl. slough during the morning, & 2 males were south of the slough, feeding. In the evening a pair was seen south of Wohl. slough, and the ♂ displayed (pooming) twice. Otherwise their activity was confined to feeding. Twice the ♀ gave a peculiar gurgle-like note. It was heard twice while she

Holmes, R.
1960

"Erolia" melanotos

2

31 May Barrow, Alaska
was feeding.

1 June Barrow, Alaska

1 lone individual seen near Elm
Lagoon: collected. Two other males seen
in the same vicinity - together. No ♀ noted.

2 June Barrow, Alaska

One heard displaying near Voth's area,
but the bird could not be located.

3 June Barrow, Alaska

One male seen "booming" along Elm
Lagoon. A few minutes later in this
same locality, a flock of 4 ♂, + 2 ♀
entered + began feeding. The displaying
male became excited + began
announcing frequently. This was accomplished
by a low flight over the tundra with
chest inflated + by giving the booming call.
The flock showed no reaction to this. The ♂
then flew into the flock, landed + began
chasing the various birds. The chase was
first on the ground, then a long chase
in the air. Sometimes he would chase
all the members of the flock at once or
sometimes individuals. This went on
for about 20 min during which time many
pursuits took place. During the chase
the throat was not noticeably inflated.

Holmes, R.
1960

Erolia melanotos

3.

3 June Barrow, Alaska

and no booming note was given. Instead, the vocalization was a "juvies" low, phoebe trill, not quite the guttural note. After this activity, the ♂ singled out one of the ♀ and gave what is apparently a pattern display. The ♀ was working down a shallow polygon trough, feeding. The ♂ came along behind her with his tail raised (cocked) & very slightly spread. He would raise one wing to the ~~horizontal~~ vertical position, then the other. The wings would either alternate or both were sometimes held overhead. The head, ^{+ neck} were held forward but high, the bill thrust forward. There was no wobbling during this walk. The vocalization was peculiar; it was a hissing note which was repeated 2 or 3 times/sec. The chest was not noticeably swelled. This whole activity went on for about 10 feet & 10-20 sec. At this time the ♀ flew off about 10 feet away & resumed feeding. The ♂ followed (but did not resume displaying) and as soon as he landed the female "squeaked" &

cont'd

Holmes, R.
1960

"Erolia" melanotos

3 June Barrow, Alaska

flew over to rejoin the flock when it flew off in a southerly direction. The ♂ then did an aerial display & landed on an elevated polygon top. During the late afternoon, only one chase was observed. In this instance, the resident ♂ took chase to a group of 5 ♂♂ passing thru his territory. The chase lasted for several minutes & covered nearly 1/2 mile in distance - even out over Elson Lagoon. Once while watching a small ♂ feeding, I saw a large ♂ land just behind & begin to "hoot" when about 10 feet from the ♂ on the ground. He then landed about 1 ft from the ♂, who took off with a loud squawk & flew towards the north.

5 June Barrow, Alaska

Many groups of pectorals were seen between Barrow & the Inuvik. These flocks were small, consisting of 6-10 birds. Some were males only, & some were mixed. These stayed usually in the wet marshy places, but appeared to be moving & not settled. Territorial ♂♂ were seen near the Inuvik,

Holmes, R.
1960

5.

Erolia melanotos

5 June Barrow, Alaska

but they seemed rather scarce.

7 June - a flock of 6 ♀♀ seen in central marsh; 2 were collected (#651, 652). Along the edge of Elson during the evening, several lone ♀♀ were noted. Usually a ♂ could be seen nearby, but only 1 ♂ was seen to give the "whooping" display.

8 June - 1 seen in the plot area, west of Ikroavik.

9 June - Several ♂♂ displaying, south of central slough. One seen in the country display described earlier. There was a very slight swelling to the chest. Several small groups of ♀♀ are present on the tundra, feeding in shallow ponds.

10 June - several ♀♀ seen on the tundra area at Ikroavik and along the ridge west & south of Ikroavik. A display ♂ was seen in Voth's Area. In the evening, several ♂♂ were seen & heard displaying along Elson Lagoon. Several evictions of birds (♂♂) from a territory ~~were~~ noted by one very aggressive bird. Quite a few ♀♀ are now seen feeding along the pond margins.



Holmes, R.
1960

"Erolia" melanotos

6.

11 June Barrow, Alaska

A chase was seen on the east end of the north beach ridge. One male (A) with a greatly distended throat was giving the "whooping" call as he chased the other ♂ (B). After about a 100 yd. chase, they both landed in a snow bank, where A assumed the following posture: he stood erect with the neck stretched upward but head held level. The tail was lowered and slightly spread. In this posture he stood in front of B for about 2 seconds & then both birds took to the air & flew into central marsh. (The chest of A was not inflated during this action on the ground).

Only 1 other pectorated a ♀, was seen during the morning on the ridge.

12 June - Several ♀♀ seen along the west shore of Footprint Lake.

13 June - 2 flocks of 3, 4 ♀♀ seen along the beach ridge during the morning.

Three flocks of 3, 2, 2 were seen in Uoth's Area. This is rather late for these unattached ♀♀ to be present, and Pitelka reports ♂♂ on the beach ridge which are flying ~~about~~ ¹⁰⁴⁷

Holmes, R.
1960

"Erolia" melanotos

7.

13 June Barrow, Alaska

distances when they are normally more located by this time. Several displaying ♂♂ were seen, but their association with a ♀ could not be determined.

14 June - a flock of 3 ♀♀ seen along the ridge west of Footprint Lake. Only 1 ♂ was seen along this ridge from the gas line to the area of Owl nest #1. One ♂ chasing another was seen in the plot area near Ikroavik.

16 June - no flocks / ♀♀ noted today, but only 1 ♂ was seen along the western edge of the beach ridge (white-rump sector).

20 June - several displaying ♂♂ were seen along the northwest end of the beach ridge, but no ♀♀ were seen.

22 June - Ikroavik, Alaska

While setting out the plot today, several flocks (3-5) birds were seen. They appeared to be ♂♂ and were chased frequently by territorial ♂♂. The birds seemed to be moving through the area, for they kept on moving.

Holmes, R.
1960

"Erolia" melandros

8.

23 June Iktroavik, Alaska

A flock of 7 ♂♂ was seen today. It remained within sight of the wanga for about 20 minutes. During this time, they were chased continually by a settled ♂. He would start out by chasing the entire flock, but would usually end up by chasing a particular individual or 2 birds. Occasionally the group would move into a second ♂'s territory, in which case they would be chased by this ♂. The chase consisted of the birds flying back & forth with the territorial ♂ (+ sometimes the others) giving the gurgling aggressive note. The chasing ♂ occasionally would give his footing display for several seconds, but these were infrequent since he was busy in pursuit. The flock finally moved on toward the west, still being chased by the territorial ♂. Two other small flocks with similar consequences were seen along the plot & just south across the inlet.

Holmes, R
1966

"Erdia" melandros

9.

23 June Iktroavik, Alaska

I have not seen a ♀ pectoral in several days. Apparently, they are now on eggs & therefore out of sight.

24 June - ♂♂ Pectorals are continuing to chase small groups of other ♂♂ Pectorals. These seem to be quite common now, as they have been noted frequently along the entire plot (25 acre lengths).

Later in the day, a conflict was noted among 2 ♂♂. First there was an aerial flight where both birds were flying nearly side by side. One of the birds would give the hooting call for a second or two during which time he would fall behind. He would then gain speed and at the same time give the gurgling chase note. Finally after about 10 yards of flying, both birds landed. Both then assumed the upright posture with head held high (bill horizontal to ground), neck stretched, and tail spread. They then began to peck towards each other but never made actual contact. After several seconds the head jerking

Holmes, R.
1960

"Erolia" melanotos

24 June Iktovik, Alaska

one bird flew off; the second resumed normal posture & began to feed. It might be mentioned that in this throat posture the chest was not puffed out.

When a Baird's Saps was flushed off her nest today, a ♂ pectoral which was standing nearby began to chase her but finally stopped off about 20 yards.

26 June Barrow, Alaska

One flock of 25 ♂♂ seen at the southern edge of the beach ridge. The birds would scatter out to feed, but as soon as one sounded the alarm, they would all flock together and fly a short distance before settling down again. Another group (of 19) was seen further west along the northern shore of Wabtschlog Slough. This group again seemed to be all ♂♂. (See catalog for collected specimens). In the evening, a flock of 24 ♂♂ were seen south & west of Britton's Area. One ♀ was included with the group, but she proved to have laid a complete clutch & had

Holmes, R.
1960

"Erolia" melanotos

11.

26 June Barrow, Alaska

a well developed brood patch.
She, apparently, had been flushed
from her nest nearby. The ♂'s -
The flock seemed to pay no attention
to her.

27 June - A flock of 6 ♂'s seen near AAC5. 2
The afternoon, several groups (2-14
birds) of males were noted in
and near Central Marsh. In the
evening a flock was seen on
the beach ridge. There were 14
birds, all being chased about by
1 territorial ♂. The ♂ would
fly to where the flock was
feeding, land, & then begin to
chase them on the ground. The birds
would immediately take flight
with the ♂ in close pursuit. No
sounds were heard from the
members of the flock, but the
settled ♂ gave the gurgling-note.
After flying up towards the ridge
and then circling back to the
slope, the flock would settle
down again. The ♂ would then
fly towards them & sometimes
over them, giving the hooting call.

Holmes, R
1960

"Erolia" melanotos

27 June Barrow, Alaska

He would eventually land again near the flock and then start chasing again. This went on for about 15 minutes before the flock flew up over the ridge + headed into Central Marsh.

28 June Wainwright, Alaska

♂♂ were displaying frequently and several territorial encounters were noted. Also there settled ♂ were "bothered" by flocks of 4-8 ♂♂ which were moving thru, similar to the situation at Barrow.

29 June Barrow, Alaska

Flocks were again seen in the central marsh area. These ranged in size from 2 to 17. It is still strange that these birds are here at this time. It seems probable that they may be a second wave of incoming birds (1st yr birds?), but it's so why are they still here at this time in such great numbers? From collected specimens + field observation (calls, etc), they seem to be birds which have not bred and therefore are not ♂♂ leaving their territories. Also

Holmes, R.
1960

"Erolia" melanotos

13.

29 June Barrow, Alaska

they are chased constantly as they move through an area, so that it seems that most of the available habitat is occupied, and that then settled ♂♂ have not left to join these flocks, although they may soon.

30 June Ikroavik, Alaska

More flocks were seen on the way down here last night, and this morning on the census plot, several small groups were seen. The majority of the activity on the plot is the activity of the Pectoral ♂♂.

Displaying is still going on; there is much chasing and territorial combat. Two ♂♂ were noted along a boundary line. The two birds were flying side by side, both displaying & giving the hooping call. Then they landed and walked side by side (in the same direction as the flight) with their heads turned toward each other. Both were in an erect posture, but not in the fully erect - tail lowered position described earlier. After

Holmes, R.
1960

14.

"Erolia" melanotos

30 June Iktroavik, Alaska

walking several feet, they took flight again & both began hooting. Eventually they each peeled off away from each other & returned to more central districts. In the afternoon west of the wanigan, a ♀ was found doing a distraction display. A ♂ landed near her, & as I watched, he would run up to her and apparently supplant her. This occurred 3 or 4 times before the ♂ left. When supplanted, the ♀ would fly a foot or two & would then resume the moue in posture & sometimes the full distraction display with tail lowered & spread. In the evening, the nest was found where the above incident took place. It contained 4 eggs which were very exposed (no standing grass anywhere nearby) and was located on the edge of a polygon, overlooking a trough & the flats north of the wanigan. This time when the ♀ was flushed, she was courted by a ♂. He flew in, landed behind her, cocked his tail with

Holmes, R.
1960

"Erolia" melanotos

15.

30 June Iktroavik, Alaska

rectrices only slightly spread, drooped his wings so that they were drooping, and then with his chest "sassing" he walked with a slight swag behind the ♀. This happened quickly & the procession lasted for 10-15 sec. No vocalization was heard; however, the ♂'s bill was open & he may have given a call (the wind was strong in the wrong direction). The ♀ showed no response to this ♂. Her distraction display this time was limited to the period before the ♂ began his display.

1 July - Flocks of ♂♂ are still present, but appear to be fewer (or at least have fewer members). A nest was found near the southern end of the plot, but unfortunately was destroyed by being crushed).

2 July - Several small flocks noted today. These seem to be larger birds with better-developed chests. It seems probable that the males which have held territories are now beginning to aggregate. Only 2 or 3 ♀♀ were noted today. The nest mentioned was checked. There are still 4 eggs.

Holmes, R.
1960

"Erolia" melandros

16.

2 July Iktroavik, Alaska

The frequency of display has definitely gone down during the last 3-4 days. It is heard now only on occasions, and ♂♂ with enlarged sheets are also rarely seen, although chasing continues.

3 July Two large flocks were seen at the south end of the lake (Iktroavik). One consisted of 16 ♂♂, the other 27 ♂♂. These birds were feeding in the flat marshy areas along the edge of the water.

6 July Barrow, Alaska

A flock of 35 seen in Voth's Slough; 7 of these were collected. Very few are now seen on theundra & no hooting has been heard for several days. Several of these were badly molting.

8 July Iktroavik, Alaska

The nest west of the warden's site is intact, and a new one was found at the NE corner of the plot. This one is on the top of a high polygon (with troughs up to 1½'). The nest is located within 2' of a trough and is in a patch of standing snow. There is grass in

Holmes, R.
1960

Erolia melanotos

17.

8 July Iktroavik, Alaska

The cup, which apparently had been matted down. The ♀ was present but gave no distinctive display or call note of any kind. An occasional hooting sequence was heard, but each time it was not in the plot.

9 July - Several scattered ♂♂ heard displaying, but none were seen. Only occasional flocks were noted in the plot, & these were generally small groups of (2-7-8) individuals.

11 July Barrow, Alaska

Only an occasional bird was seen today, and most of these seemed to be ♀♀.

12 July - A flock of 19 ♂♂ was seen on the west side of Footprint Lake, & another of 8 indiv. was seen at Traps 4A+B (NW of Voth's Area).

13 July - On our way to Oakpile Slough, I noticed numerous groups of pectorals in the marsh (Central) and a few small aggregations on the polygonized area near the sloughs. In the evening I returned & collected 7 birds from a flock of about 30 in Central

Holmes, R.
1960

Erolia melanotos

18.

13 July Barrow, Alaska

Marsh. Three / There were ♀♀, all of which had brood patches (one was beginning to feather-out). There may have just been adults with eggs or young out feeding? - or birds with nest failures. The ♂♂ + ♀♀ all showed body molt in ~~the~~ various stages. Some were just beginning; others were molting heavily. No wing molt was observed. The birds appear to be light breasted which has resulted from molting their feathers.

14 July Barrow → Ikerasak, Alaska

Several groups seen between here & the lake. Most / There were in moist places (old lake bed, lake edge, etc.). None were noted, however, in Footprint lake.

15 July Barrow, Alaska

Only several small groups were seen in North's Area + Slough + vicinity.

16 July - Very few flocks noted during a trip to the fuel line plots this afternoon. Central Marsh was again low in Redpolls - only a few seen

Holmes, R.
1960

Erolia melander

17 July Barrow-Ikroavik, Alaska

Only small groups of pectorals were seen today between the camp & the lake. These usually consisted of 4-6 birds, which were feeding in quiet places. On the plot at the lake, only occasional birds were seen. The ♀ there was still on her nest (see 20-0.1)

18 July Barrow, Alaska

One large group was encountered today west of meadow lake. Of three birds taken from this group, all were ♀♀. It is also worth noting that many of the birds that I have collected recently from flock have been ♀♀. All of these have had well developed brood patches; a few have had feather starting to moult the patches, as if they hadn't incubated for a period of time. No one here in the lab has seen a brood of pectorals this year (besides the one nest that failed west of the wangan). It seems probably that there may have been a very poor nest success this year & that the

Holmes, R.
1960

Erolia melanotos

20.

18 July Barrow, Alaska

results in this early flocking of the females.

19 July A large flock of pectorals were present in Voth's Marsh this morning. Many of the birds were ♀♀ and all were in some stage of body molt (see RTL # 740-745). One brood of 4 young was encountered west of the marsh. The chicks were at least a week old & weighed 40-50 grams. The ♀ was present & gave several sequences of the distraction display. This was primarily a fluttering of the wings as she moved away from me. Her tail was lowered & spread; the wings were held out away from the body - but were still cupped.

21 July Iktroavik, Alaska

Several more broods were found between Barrow & Iktroavik. One had just hatched; 2 others were 5-6 days old. Several broods were also reported by Mabe & Reynolds in Central waste. The young & ♀ are often found in the wet marshes.

Holmes, R.
1960

Erolia melanotos

23 July Meade River, Alaska

One ♀ with flying chicks was seen SW of the village.

25 July Barrow, Alaska

No flocking ♂♂ have been seen for several days now. Two broods + their ♀♀ were encountered in the marsh areas north + west of Voth's Area + marsh. The ♀♀ seem to lead the young out to these marshy areas when feeding may be better.

26 July Barrow = Ikroavik, Alaska

No flocks / ♂♂ were encountered during a trip from Barrow, around Ikroavik lake, + back to Barrow. One ♀ with young (2 days ~) was seen at the north east corner of the plot. Another ♀ was seen at the south end of the lake. The chicks can swim if forced, even when they are a day or two old.

28 July Barrow, Alaska

1 excited ♀ was seen near Voth's Area. Her chicks were not seen, nor were any other pectorals. ♂♂ have not been noted now for quite awhile, & they have apparently left.

Holmes, R
1960

Erolia melanotos

22.

29 July Barrow, Alaska

None seen today in the area east of the gasline.

2 August - Small flocks + numerous individuals were present on Footprint Lake today. Most of these birds were in the northern half of the lake + were feeding in the wet areas. (Estimated 200+ birds were present). These represented both ♂♂ + ♀♀, most of which were undergoing a body molt. Several flying juveniles were also present (1 collected). None were seen on the tundra near Voth's Area.

3 August Barrow = So. Barrow 3, Alaska

The numerous birds on Footprint Lake were again seen. The only other predilect noted during the trip was one ♀ which was performing a distraction display on the large marsh, (mile No. of So. Barrow 3). Her young were not seen. It seems likely that most of the young birds now are fully grown and flying. Their number should increase in the

Holmes, R.
1960

Erolia melanotos

23.

3 August Barrow = So. Barrow 3, Alaska
feeding areas, near Footprint
Lake.

6 August Barrow = Ikerasik, Alaska
Only 1 or two birds seen on the
plot today. + They both
appeared to be stragglers. In
Footprint Lake, the pectorals were
out numbered by the Redpolls.
Both Ad. (mostly ♀♀), and
flying juveniles were seen. A
partially grown chick (#823) was
collected near the inlet to the
lake. The ♀ was in attendance
and became very excited.

9 August Barrow, Alaska

Several scattered individuals seen
north of the Beach Ridge near AAs. There
were also a few in Central Marsh.

13 Aug - A large flock was seen in Central
Marsh. It was composed of about
70 birds - which were mostly
juveniles. Small group of 2 + 3
immatures were seen during the
jager watch.

15 Aug - None were seen in Footprint Lake
today. The lake was nearly devoid
of shorebirds. Several birds were

Holmes, R
1960

Erolia melanotos

15 Aug Barrow, Alaska

seen along the inlet going into the lake (Ikroavik).

17 Aug - Several juveniles seen near Voth's Area. No adults have been noted for several days now.

21 Aug One juvenile was collected on the ridge SW of Footprint Lake & 1 was heard near Voth's Area. None were in Footprint or Dry Lake.

25 Aug Several flocks of Pectorals (juveniles?) were seen in the marsh today.

These varied in number from 10 - 24. Occasional juveniles were seen scatteredly in the tundra.

26 Aug 4 individuals were seen in Central Marsh near N. Treplesin. All were juveniles.

28 Aug Scattered birds seen in Central Marsh & down toward the Fertilizer plots. All these were juveniles (see Pitelka's catalog).

30 Aug About 15 individuals seen between the base & the Fertilizer plots. All were juveniles which were not undergoing any molt. See Catalog for 29 and 30 Aug. This is the most plentiful sighting in the tundra. The

Holmes R
1966

25

Erolia melanos

30 Aug Barrow, Alaska

Last two days have been below freezing & the ponds have remained solid through most of the day. The ground water is also freezing - which now makes feeding difficult.

31 Aug - 6 seen between the base & the fertility plots. $\frac{1}{2}$ " to 1" of snow was on the ground by noon but most of this was melted by evening.

2 Sept 2 seen today, 1 across from first lagoon - the other in central marsh.

Holmes, R.
1961

Erolia melanotos

4 June Barrow, Alaska

Several birds seen today - these were on the exposed bluffs overlooking the family lagoon - between Britton's + Voth's Areas. I would guess 6-7 different ♂♂ were seen. In one case three were seen being chased by another, indicating that this one individual was already settled, while the other three were just moving in.

Another similar case was noted just east of Voth's area. A ♀ was feeding on a grassy sedge slope. A ♂ flew in landed about 2 feet away, immediately went into its courtship posture - tail cocked, and not spread. Wing held in normal position, possibly slightly drooped, head held high but bill nearly horizontal - throat sagging & slightly bulged. - see attached diagram. The ♂ moved in a circle around the ♀ in this posture about twice when another ♂ flew in, landed, called (could see beak move - but wind obscured sound) & the 1st male flew off, followed by the aggressor & a chase ensued. The 2nd ♂ displaying violently with the throat sacs. The ♀ continued to feed. After watching the ♀ for about 10 minutes, she gradually worked her way up to the ♂, who was now feeding. When he first saw her, she was no more than 5' away & he immediately assumed

—

Holmes, R.
1961


Erolia melanotos

2

4 June

Barrow, Alaska

The courtship posture, as described above & proceeded to circle her in good complete, relatively even circle.

Finally he came up to her; she  jumped into the air, flew about 3 feet, landed, & resumed feeding (she had not stopped feeding when the ♂ was performing & was paying no attention to him). The ♂ waddled over to her; this time causing her to fly off for 30-40'. Both birds then began to feed & no more courtship was seen. The ♀ was collected (1085).

Apparently, even though a ♀ is attached to an area or to a ♂ in that area, she still is courted or possibly in display to until she is receptive.

5 June

2 ♂♂ & apparently 1 ♀ - seen along the 100. Shore of Wohlachlog Slough. All were feeding together - no courtship was going on. They would feed up to each other, but each ignored the others. There may have been transients who are not courted yet. (or this may have been a young or slowly developed ♂ & not a ♀).

6 June

Occasional single ♂♂ were seen today between Vothis & Ikroovik. Only 2 were seen in aerial display - none in ground display. One flock (♂♂ & ♀?) was

Holmes, R.
1961

Erolia melanotos

3

6 June Barrow, Alaska

encountered. One large ♂ was collected; they all seemed to be ♂♂ - even though 2 or 3 did not look fully developed.

7 June - another flock of 4 ♂♂ seen near Elson lagoon; all were feeding together - with no stuff. They were chased by 1 displaying ♂ who followed them until they were out of sight. A ♀ was found feeding in

an area which was being patrolled by a well-developed ♂ - 1st seen

this year. Another flock of 12-14 birds was found No. of Ooth's area + so 1 The village (along the ridge top near the beverage antennae). This group consisted of 4-5 large, well-developed ♂♂. The remainder seemed to be smaller - more ♀ like, but it is likely that these are either young ♂♂ or ♂♂ which have not developed the throat coloration & enlargement. Three were collected (#).

9 June - none was seen on the Herovick census plot. Also none were noted on the entire trip down to Delors.

In the evening, east of the beach ridge near Elson lagoon, several flocks were seen. These were composed of 1.5 (in central marsh), 8, 7, 3, 8, 6, 5, & 4. and appeared to be composed

Holmes, R.
1961

Erolia melanotos

9 June. Barrow, Alaska

of ♂ & ♀. No courting activity was observed, but when 1 flock was flushed, the birds flew up & circled & me & returned. The group displayed & then settled down with the others to feed. This was in central marsh, & I doubt to be even settled there as of yet. An occasional ♂ was seen or heard displaying. In one case a ♂ walked up to a ♀ & as he was walking toward her (facing her), he cocked his tail, but left his wings in normal position, raised his neck, head held high, bill horizontal, throat pulsating with hooting. The ♀ turned & walked away, the ♂ deflated & began feeding.

11 June

A flock of 8 indiv in central marsh - when bird was heard to display as they flew from 1 area to another - all seemed like ♂♂.

When censusing Little's plot, no P.S. were seen on the plot. - A pair was seen at the very south end & 1 pair was seen about 300 yards to the north. When these birds have been extremely scarce. Two ♂♂ were seen displaying near APC & Sullivan reported seeing between them & the beach ridge - so there are some still around.

Holmes, R.
1961

Erolia melanotos

5.

13 June Barrow - Ikroavik, Alaska

A few ♂♂ were seen & heard along the census plot today, but numbers are still low. Two flocks of 4-5 indivs were chased by settled ♂♂. Some of these birds seemed to be small, but this is not certain. - A ♀ shot 11 June - showed no eggs had been laid.

17 June - The great lack of PS is still noticed - The B.R. census plot ~~are~~ is nearly void of this species - 2 displ. ♂♂ were seen (1 heard), but only one. 6-8 ♂♂ were feeding together near the corner of the marsh, but show no sign of breeding activity.

20 June On the day-long trip to Ikroavik today - only 1 bird, a ♂, was seen - it was on RBR. Feeding. None were on the plot at the lake. In the evening when the wind calmed, I went to the Voth Slough etc - & saw 2 ♂♂ with the displaying. None were heard displaying - anywhere.

23 June 1 displaying ♂ seen near the census plots.

24 June A flock of 5-6 ♂♂ seen - central marsh. -

None were seen on the tundra. Between Wohl. Slough & Oskupuk slough. Numbers are very low.

25 June Large flock seen today in Central Marsh & on the B.R. One flock of 12 was

Holmes, R.
1961

Erolia melanotos

6.

25 June Barrow, Alaska

near stake 13 on the plot & 1 of 24
near stakes 19. all were seen &
not feeding. A group of 12-14 were feeding
at the NE corner of central marsh.

4 were seen near Voth's Area. All were
♂♂. 1 ♀, 1 ♂ were seen together

& collected north of Trogline III A+B.

The 2 were feeding together - there was no
sign of breeding - although the ♀ had a
brood patch.

26 June Again large flock was seen in the
marsh & 1 of 8 birds was fed
N. of the B. R. - near the southern
edge of Footprint Lake.

27 June 1 ♀ seen on the plot at Ikroavik. Two ♂♂
seen together in the marshy area south of
Footprint Lake - both seemed to have "baggy"
throats - but no conflict was noted. Several
♂♂ have been collected recently by
Sullivan & some of these are showing
signs of molt - especially on the dorsum &
on the throat where pin feathers are "sprouting".
- see JOS's catalog.

This year, there seemed to be less flocking
than was seen last year - when flocks
were present through the season. During
the middle of June, birds were rarely

Holmes, R.
1961

Erolia melanotos

9

27 June Barrow, Alaska

seen - either displays - or flocking. It was not as if there was just a lot of breeding going on. but plainly a lot of birds.

28 June A nest was found near the insect plots with 4 eggs - The ♀ gave a strong distraction display. - Nest was in a slight trough between 2 "bumps" (not polygons) on the sloping ridge. The eggs were relatively well covered / grass, but were still visible.

3 July 3 ♂♂ seen between the insect plots & Vth Area. The nest at the plots is still intact & the ♀ incubating.

4 July None seen in Central marsh, 2 ♂♂ seen on B. Ridge. It appears that the ♂♂ have departed - or have at least disappeared. The nest was ok - near the insect plots.

7 July The only birds seen between the lot & Ikroavik - were 8 birds (♂♂) in the Footprint Lake. A group of 6 were No. 1 U.K.!, seen on the marshy lands so. & e of the insect plots (3 collected - all ^{body} males - 1 was a ♀).

9 July 2 birds seen in central marsh. Both ♂♂, 1 collected & it was molting. None other on plot, none in area east to Olson & Crookley.

Holmes, R.
1961

Erolia melanotos

8.

- 11 July Barrow, Alaska
♀ was still on her nest near the insect plot - no sign of hatching yet.
- 13 July None seen in Central marsh, on B.R., or between Wohl + Volpik Sloughs. The ♀ was still incubating at the nest near the insect plot. Apparently all ♂♂ have left - none have been seen since 9 July.
- 14 July A flock of 5 seen w. 1 the insect plot in the marshy areas. - 3 collected - molting heavily (body - no wing & tail molt).
- 15 July 1 large adult was seen near the insect plots. 1 ♀ and 2 young were encountered near O.O. of T-line IV A. The 2 young were taken for R. Zusi.
- 16 July - The nest near the plots contained 1 wet down young & 3 pipping eggs. No others were seen.
- 19 July None seen.
- 21 July 1 ♀ seen near U.O.A., here. No young!
- 26 July 1 ♀ with chick seen in the lower end of Footprint Lake. - the chick was cov. - see FAP & apparently had a bat - larva of same kind - (saved) A group of 3 ♀♀ seen along the shore of Ikroavik - feed in the wet grassy areas.

Holmes, R.
1961

Erolia melanotos

9

30 July Barrow, Alaska

1 ♀ seen along an Arctophila Pond,
So. of Wohl. slough.

2 Aug 1 Flying juv by itself seen & coll. near the
insect plots. 2 more seen near the
inlet north of the wanga at Ikroavik.

4 Aug a group of 15 Immature found
feeding scattered - around the
lowland ponds at the insect plots. They
were feeding by probing among a
grass & moss which was covered by
the overflow of water - due to the recent
rain - 1 coll.

7 Aug 3 Immatures seen So. of Oolysak.
1 " calli Footprint & one near the
NW inlet into Ikroavik by R. Robertson.

8 Aug Sev (10-15) juveniles seen between the
insect plots (Ponds, A, B, & D) & Wohl's
Area. All were feeding in the wet
hooded-grassy areas.

9 Aug 3 seen feeding along the Arctophila
Ponds, No. of Wohl's Area.

11 Aug 30-40 Imm scattered through
central marsh.

18 Aug Scattered juveniles have been
seen regularly in central marsh,
near the insect plots, fertility plots, &
Footprint Lake.

Holmes, R.
1961

Erolia melanotos

16

21 Aug. Barrow, Alaska

1 Immature collected by Robertson
near Voth Area.

23 Aug - 2 seen in central marsh (Imm.)

27 Aug - 2 juv or cockpit census plot.

Holmes, R.
1962

Erolia melanotos

29 May BARROW, ALASKA

Flock of 6 large ♂♂ seen feeding in 40' x 20' exposed area - at the corner of Elson Lagoon + Wohlsehlog Slough. - No aggressive action was seen between the birds. - 1 was collected.

30 May 1 ♂ seen during the afternoon; 2 during the morning. No aggression or sign of display were observed.

1 June Two males seen chasing (near Elson Lagoon). The flew back & forth - swerving & turning flying low - the starting up & doubling back. The male in pursuit had an enlarged throat - it expanded - but no sound could be heard (may be due to strong wind). 1 ♀ was seen feeding with several Dunlin.

2 June 1 pair on exposed tundra near Lookout + Elson junction. The ♂ did two or three aerial displays during the half an hour we were in the vicinity. The host was deep & resonant - the bird flew at 6-10' height. The ♀ continued to feed. Two other ♂♂ were seen just north of this area but did not appear to be the cause of the display. There was the 1st good hooting I have heard this year.

Holmes, R.
1962

Erolia melanotos

2

2 June Barrow, Alaska

2 displaying ♂♂ seen along Elm Bluffs;
1 ♀ was seen. (There two ♂♂ were not
displaying near each other one was
near Wohlsehlog & one near Oolpik

4 June 1 ♂ near #182 Bluffs; 1 on Britten's Area.
No display seen.

5 June None seen Between Britten - Voth - Insect
area.

6 June None seen at Britten's Area, along Village Slough,
or at Ikroavik. One ♂ seen east of
Voth area. - sitting - no display.

One ♀ seen just N. of Wohlsehlog Slough -
as well as 1 ♂ - who was later heard
giving an aerial display. A flock of 6 ♂♂
was encountered near Oolpik - all sitting,
preening & in general inactive.

7 June 2 ♂♂ heard displaying on the open grassy bluff
east of Voth Area. Later a flock of 4 ♂♂; 2 ♀♀
seen N. of Wohlsehlog along Elson Lagoon. Near
Oolpik Slough - a flock of 12 ♂♂ - some ^{with} quite
well developed throats + 5 ♀♀ - feeding together
flew together - later - a flock of about 35
birds seen at the southward of Wohlsehlog x
Elson junction - most seemed to be ♂♂. 1 ♂
was heard displaying near Oolpik.

8 June Flock of 8 along Elson Lagoon near Wohl-
shlog. Two somewhat close - ♂ & ♀ - ♂

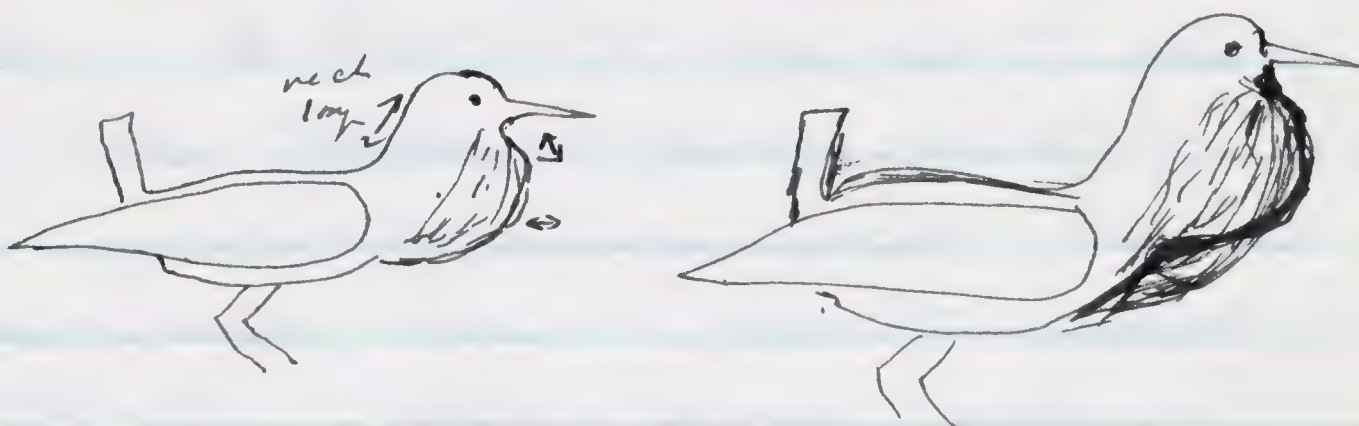
Holmes, R.
1962

Erolia melanotos

3.

8 June Barrow, Alaska

rocked tail, wings in normal position, head up + moving back + forth - whole throat also vibrating



+ followed off the small bird (♀).
Stopped off 3 times.

Beside this flock of 8 ♂♂ - a group of 6 ♀♀ was noted just to the south + the above courtship was done on the edge of these two flocks.

Just N of Oolagut - 16 ♂♂; 6 ♀♀ - L flock. - feeding in close proximity to each other with no apparent interaction.

In the evening - a flock of 12 plectonks were seen east of Oolagut - + the group of 6 more in the same area late in the evening (the previous ones had flown further to the east toward Gasline ridge).

9 June Large flock encountered along the exposed bluff - along village creek - 49 birds - about 15 / which were ♀. No courtship or aggression was seen.

Holmes, R.
1962

Erolia melanotos

4.

9 June Barrow, Alaska

Later - about 50 yards to the south another flock was noted - The first with 12 ♂♂. All birds were busy feeding. A flock of 15 was at the south end of the Ikroavik census plot - again apparently moving south. I wonder if these birds come in from the coast & follow the creek & lagoon inland - along the bluffs which are exposed. This seems to be out - since the are only seen along E15, Village & Voth Creek - & then at Ikroavik.

A group of about 15 - mostly ♂♂ were seen feeding in the lowlands - So. W. of Britton's Area.

The amount of flocking this year far surpasses what has been seen in 1961. However, relatively few displaying are seen & heard at this time - which seems peculiar in comparison with 1955 & 60.

10 June - sev. birds - mostly ♀♀ seen feeding So. of Britton's Area & a group of 3 (2 ♂♂; 1 ♀) on the insect plots.

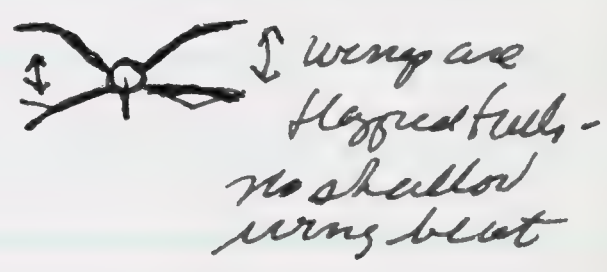
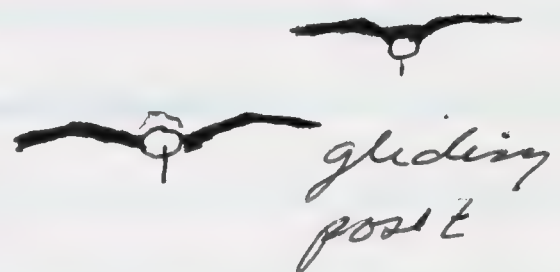
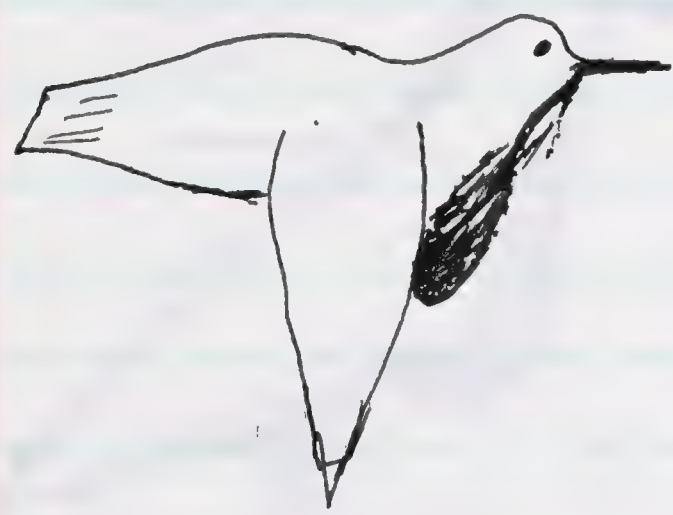
One male feeding & displaying on the slope opposite (So. of) Voth area. In the alert posture - the throat & neck area is quite baggy - former & low flap - In flight the head flap held at an angle

Holmes, R.
1962

Erolia melanotos

10 June Barrow Alaska

height ~ 15 feet - the glides down on ^{level see above} down-curved wings - the flapper back - again. The whooping is given when the wings are flapped. During the display the bulging throat can be seen from behind - it is hanging down quite far.



♂ just gave courtship display female - note given was a very gargle-gurgle given over & over for at least 1 minute as head was moved back & forth & upper chest was flapping, but was not inflated.

♂ had tail cocked wings in narrow posture - head high

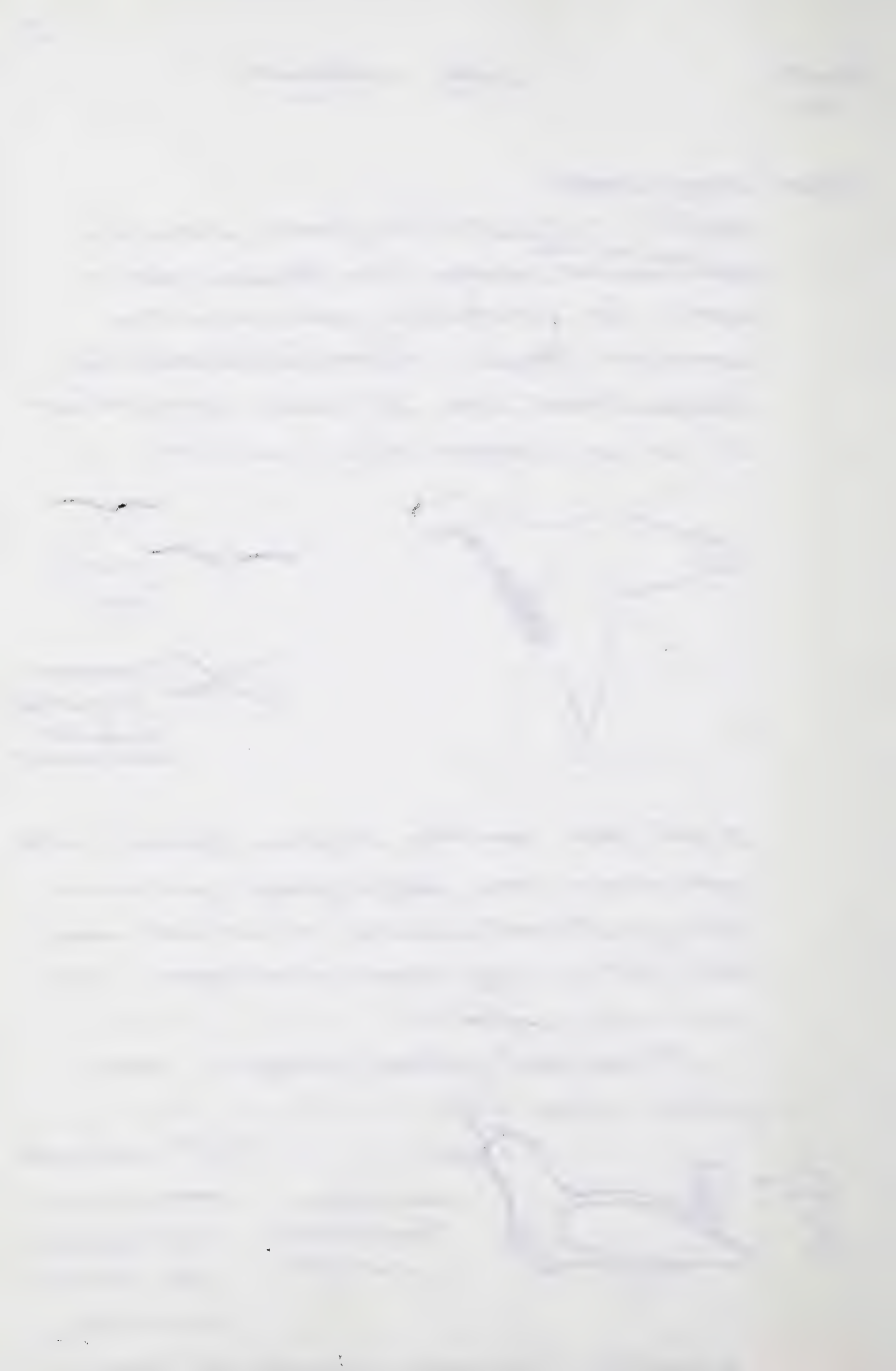
not spread
↓



level-feather
Throat flapper -
not inflated

The ♀ was just
inches away -
I was trying to
see - the ♂
was walking

behind her. The posture was making the strange noise.



Holmes, R.
1962

Erolia melanotos

10 June Barrow, Alaska

This display was broken up by a female - who had been feeding about 50 feet away & when apparently upon hearing his note (?) - flew & landed near the pair - given in loud call - both P.S. flew off - both separating but staying in the same vicinity.



Aerial display - during the glide - when the wings are held in a fixed posture - the throat just sags slightly & is not moved. When the wings are moved - then the throat inflates & deflates & the head is jerked up slightly as call is given - i.e. as wing beat is down.

I just seen doing the courtship display again - followed - behind ♀ - remains - turned & doubled back - finally she flew off 20' - he resumed feeding. This was another ♀ than the one he had just finished courting - 5 min. before. He was feeding in the area where she had been courting; the other ♀ was 100' away.

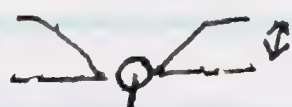
Holmes, R.
1962

Erolia melanotos

2

10 June Barrow, Alaska

The courtship display was seen twice on barrel ridge. The ♂ went into full posture as previously described - giving the odd call note - (above) - with throat partially inflated. Then he flew off - the ♀ in pursuit - but display flight was different. The wings were flapped above the horizontal - i.e. there was not the full wing beat as in territorial announcement.



courtship flight



territorial announcement.

The ground courtship posture was seen today on the north side of Wohlshy slough - it was as described except that once the ♂ shook one wing to the side (+ up & down) & the back - three times - as he pursued the ♀ who was running away from him. When she flew off, he turned & gave the display (without the wing shake) to another female nearby. Three flocks - 9, 8, 6 - seen in the area.

a flock of about 15 + several display

♂♂ seen along Elson Lagoon - NW Wohlshy

11 June

Two displaying ♂♂ between Beech & Goshline Ridge - flock of 8, 4, & several display birds along Elson Lagoon.

12 June

- No flocks noted along Elson bluffs - but groups of 3-4 seen flying south - between the bluffs & the Beval Ridge - few display birds.

Holmes, R.
1982

Frolic melanotos

13 June Barrow, Alaska

One displaying bird near E'son lagoon - general scarcity. One heard so. of Britton's Area in the evening. No flocks noted.

14 June Small flock of 5 ♂♂ seen - west of Ootegik Census Plot - one of the birds may have been settled - but was not trying very hard to evict the remainder. Three-four display ♂♂ seen in the Ikroavik Plot.

The general impression now is that birds are scarce - settled ♂♂ here & there but not in "normal" numbers. The scarcity of flocks now indicates that the birds here previously in groups have now dispersed into the rapidly opening tundra - a bare left to other areas.

16 June Flock of 15-20 ♂♂ seen along Elsa Bluff - no aggression noted: one case where 20 ♂♂ were chasing a ♀ - initially - the ground - then a aerial chase of 1 male after the other. This chase - 13 birds - off a ♀ was noted again in the evening - apparently 1 ♂ succeeded in chasing the other too off.

17 June 2 ♂♂ feeding along Elson lagoon. 1 ♂ displaying along Wohlshills. In the evening - 20 ♂♂ heard displaying between Britton & York Area. General very little activity.

Holmes, R
1962

Erolia melanotos

18 June Barrow, ALASKA

Several displaying ♂♂ seen along beach ridge between the 1st row of antennae + north creek. One encounter of 2 ♂♂ was watched in detail. When 1st seen, they were flying side by side, both displaying - both undulating together. They landed - 3' apart both assumed the aggressive posture (upright) - stood facing one another. Finally one lowered its head - ran toward the other in the hunched - aggressive posture - the other fluttered in the air - the ^{aggressor} ~~other~~ then flew up - + then both flew off in a display flight. After flying - 30 yards - they landed again - scrapping again - backing off - standing upright - dashing again. One bird seemed to be more aggressive + did most of the charging + chasing - although in the air both birds displaying equally. [Most of the activity - must have been in one ♂'s territory - to account for his aggressiveness.]

20 June Ikroavik - several ♂♂ displaying + chasing in the north-half of the plot. - see census sheets. Late in the evening - in the area between the wannye + the inlet to the lake - ♂♂ were continuously seen +/or heard displaying + chasing. No flock were noted. One ♀ was seen - counted briefly by a ♂ - but paid no attention - showed no nesting signs.

Holmes, R.
1962

Erolia melanotos

10.

21 June Barrow, Alaska

Again several ♂♂ were displaying a No. 1 stab - & considerable chasing was noted. These appeared more as territorial disputes - not - settled ♂ chasing off un-settled birds.

One flock of 6 ♂♂ see No. 1 Steward & W. 1 Footprint - feeding in a low grass Swab. One ♂ feebly attempted to chase another bird on the ground - but both quickly resumed feeding.

22 June Flock of 6 ♂♂ - been chased by a single displaying bird - so 1 the beak ridge. Flock of 64 ♂♂ reported by Stevens between Receiver Site & B.P. -

23 June last mentioned flock seen this morning - at least 80 birds - seemed to be well developed - Throaty ♂♂ - but one attempt to stab - gave only a crooked note. One bird in the flock on the ground - then another - in low head - agg. posture - but both resumed feeding side by side.

Increased activity - mostly in chasing - but also some in displays seen in birds along the B.P. & east toward Eise Lagoon. The number of settled birds does not seem to have changed - but more birds are now moving through & causing

Holmes, R.
1962

Evotia melanotos

11.

23 June Barrow, Alaska

more chasing. The large flock near the receiver site remained in the vicinity all day. By evening, Stevens reported it a somewhat smaller (i.e. 40-50) & located closer to middle salt lagoon.

24 June - Very little activity on the Throat plate - However I encountered between ♂♂ - chasing a ♀ were seen. In one case - a single ♂ was chasing a ♀ - both flying low over the ground & repeatedly. Suddenly 2 additional ♂♂ joined in & all three were giving the aggressive gurgling note - each ♂ flying at random while all were following behind the ♀. Finally, the original ♂ chased the other two off & returned toward the area from which he had come - the ♀ having already turned & heading in the same direction. Another similar situation seen - but only 2 ♂♂ were involved - both chasing the ♀ - as they flew behind the ♀ whenever given the typical prenest call note - a high pitched & non-musical note - from the "gurgles" given by the ♂ in flight - may be homologous.

Nest located on the plate with 3 eggs - on gentle slope with several low mounds. The nest was situated in-between two mounds of moss - sparsely surrounded by coarse N₂ - yet out of sight -

Holmes, R.
1962

Erolia melanotos

24 June Barrow, Alaska

ducks height / moss. When 1st approached - the ♂ (largest "chest") was standing just 10' away. As I came close - the ♀ flew out - apparently off the nest, landing 60' away & began feeding - no distraction behavior was given. I backed off & watched - after 10 min - the bird fed slowly & normally around - a large circle, ending near where I had flushed her. Then she ran fr - foot stopped, fed - ran again - showing a little more sig. of a nest nearby & finally settled into the cup. - When she was flushed this time - ~~she~~ ~~she~~ she flew off 30' - wobbled and wobbled off through the grass. The ♂ at this time flew & landed near her - apparently trying to mount - but she kept moving off. He gave some "aggressive gurgles" - & ran off to be - she then followed with more gurgles - finally she landed & he flew off to give a loud display. - Apparently in feathers egg laying is just getting underway.

West of the runway - a flock of about 30 ♂♂ were found feeding - none shown any aggressive. A settled ♂ displayed nearby - but did not go closer than 20 yards - settled & fed. The flock moved a west.

Erolia melanotos

25 June Barrow, Alaska

Flots steel present in the bed ridge &
near the low-land ponds at the insect
area. Chasing by settled ♂♂ is frequent.

26 June Several flocks on & near the beach ridge.

In one case - 2 ♂♂ were involved in a territorial dispute - flying side by side - both whooping - when from somewhere nearby a ♀ appeared - both males went chasing after her - both giving the gurgling rattle (although one bird gave this call more frequently & seemed more dominant in this respect). Later, at least two more ♂♂ joined the chase - but left soon afterwards. ♀ must be in short supply.

27 June Nest found earlier on Ikroavik plot - now with
4 eggs. ♀ was incubating - but moved off
the nest when I was 60' away - &
fast obs. slight mouse run - no nest
destruction behavior. A second nest
located at the south end of the plot - with
4 eggs. ♀ showed no destruction behavior -
but remained close in the vicinity - acting nervous.
Juv - 3 chicks of 3-4 ♂♂ seen on the plot
during the day - most 1 juv. raced across
the plot - very little displaying observed
was seen & settled ♂♂ - only ^{two} interaction

Holmes, R.
1962

Erolia melanotos

14.

27 June Barrow, Alaska

whooping display heard on the census plot.
Flock of 6 along wanniga inlet to Ikroavik
+ a group of 8 at the south end of
Central Marsh. In the evening, a
flock of about 25 - flying in a close
pack - several individuals giving quagga
note - flying high over the beach ridge.
1 display ♂ heard during the evening.

28 June Two small flocks of ♂♂ - between Britton
+ Voth Area. Only 1 displaying ♂ - seen on the
slope on the south side of Voth Creek -
across from Voth Area. - territorial display -
chased a group of 4 wandering ♂.

29 June Several flocks of ♂♂ along the beach ridge +
south of Wetherslog. Slough.

2 July Ikroavik - large flocks (20, 40, 6, 8, etc.) along
the inlet to the lake (NW.) - near 10.0 - plot
+ again at 15.0 → 20.0. In one case 7 ♂♂
were chasing a ♀ + female; displaying
♂♂ attempted to chase out the flock or
at least individuals of the flocks. Only 3
"booming" displays were recorded during
5 hours on the plot. Large flock of about
60 - seen NW. of Ikroavik - but west of
Footprint Lake. This flock contained large
individuals - with "baggy" throats - possibly these
are ♂♂ asserting territories. The remainder

Holmes, R.
1962

Erolia melanotos

2 July Barrow, Alaska

of the birds were in varying stages of "maturity" - many look like young, immature one-year olds.

The nest a lone and / The plot was gone. No sign of the ♀ nor the display on ♂. which was previously in the area. The new male 12.4 was still intact: The ♀ jumped off when I was 20' away & went bouncing over the tundra in a fluttering flight - wings spread to the side - flapping - feet all ruffled - giving high-pitched squeaky noise - After 20' - she landed - went into a mouse run posture with head & back hunched - both feathers ruffled - wings held out slightly from the body & moved in & out, tail lowered & spread - head turned & looking at me - running off through the polygons.

3 July Several groups (5-15) of ♂♂ seen along the beach ridge & in central marsh. No displays heard today.

5 July No pectorals found or seen along the Beach Ridge - central marsh - nor were there any in the fertilization plots & vicinity. At Ikroavik, however, a group of 15-20 were on the north plot - & later when they flew up into a flock - at least 40 were present. Another nest found

Holmes, R.
1962

Erolia melanotos

5 July Barrow, Alaska

[near 20.0] on the plot - with three eggs.
The ♀ flew off when we were 30' away -
flew at R. 25 ft or so - a low fly -
landing 40' away & walking off from
the trough in a partly-hunched posture.
No pronounced distraction display was
observed. The nest was located on the
east slope of the ridge in a densely-
vegetated, large, flat (i.e. low) polygon
& was covered over by the tall sedges.

The ♀ was incubating at nest near 13.4
on Ikroavik Plate. She flew low over the ground
when leaving the nest. No distraction display
was noted.

No displaying ♂♂ were seen or heard -
no territorial defenses were noted. The only chase
was between ♂♂ - these flocks on the
plate.

The demonstrative call ^{note} between ♂♂ & ♀
is quite striking. The ♀ is - being a
high-pitched & rising chirp - the ♂
a low gurgled versu. (The same note.)

6 July

Pectorals reported a rare or dead-end
census plot by lines. None seen in Arto
marsh; group of 4 ♂♂ encountered out near
Elson Lagoon - feeding. No displays were
seen or heard.

Holmes, R.
1962

Frobia melanotos

17

7 July Barrow, Alaska

Flock of 4 ♂♂ in area of polygons + pools -
NE of magnetic station + beach ridge.
Another group of 22 encountered on B.R. -
east of magnetic station. 3 ♂♂ included
in this group - were not being pestered
by the ♂♂ - all were feeding actively.
One ♂ + 1 ♀ were collected.

FEEDING BEHAVIOR - Three ♂♂ feeding ~~actively~~
down the north slope of the B.R. were watched feeding -
+ this was recorded on the feeding sheet.

Nearly all feeding action was pecking at the
surface of the ground +/or at the vegetation
[habitat was ridge slope thickly covered
with 3-4" grass + sedge]. Virtually no probing
was noted - the birds would work slowly,
pecking to both sides - sometimes the head
would be lowered - as if to feel + the bill
poked up - it indicating that whatever
was seen - was not food item - or it
had moved. - Sight seems to play
a good part in food selection at the
time. This lowering of the head +
jerk back - gave a bobbing appearance
to the head.

8 July

Flock of 10 at curve of Beach Ridge -
Central marsh + 6 were - slopes W. of Wohlseh
Slough - all ♂♂ - No aggression nor displays.

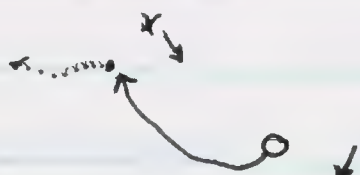
Holmes, R.
1962

Erolia melanos

9 July Barrow, Alaska - Ikroavik

Nest near 20.1 - gone - no sign of the ♀ or young. Nest may have been predated.

Nest near 13.4 still active - ♀ left the nest when I was 100' away flew toward me - landed off to the side - in partly hunched posture - ran off through the low polygons - in a low running posture.



As I left the nest - a ♂ flew up + off to the E. - given the low call-note - This was the only ♂ PS seen - the plot - so possibly he was still associated with the nesting ♀

Several ♂♂ (1 group of 3 + one of 6) seen in the marsh at the south end Ikroavik.

10 July Flock of 6 No. 1 inner plot - scattered ♂♂ in marshes NE of May. station (totally perhaps 10 birds). One flock of 7 encountered 100 yards E of APES.

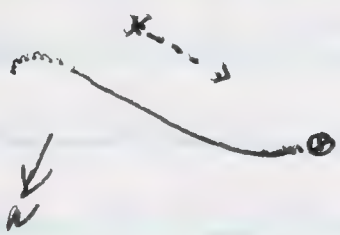
11 July Small groups of ♂♂ - [2-5] seen No. 1 Outer Area + near B.R. - central marsh - also lagoon area. One when 4 L-t. Jaegers flew over - the 2 PS in my sight - crouched down on the side of a polygon - remained quiet until the birds had passed over.

Holmes, R.
1962

Erolia melanotos

12 July Barrow, Alaska

♀ on nest near 12.4 - gave distraction display - left nest when I was 60' away. flew low over the ground with strong wing beat, landing 100' going into a ground-running wing to the sides + stopping action. shuffling off through the grass



- finally became ravenous - a rodent run posture - running off through the low polyga brush. Runs the wings high - she gave a high-pitched squeaky note.

No other PS seen in the plot. 4 ♂♂ seen No. 1 Voth Area in the afternoon.

14 July One ♂ seen in marshes - So. of Brant Point - near Elson Lagoon. One ♀ collected No. 1 Voth Area - was was in heavy body molt + at the same time had accumulated much fat. The brood patch was refeathered + the young were located - as she may have failed to bring off the eggs +/or young.

16 July Flock of 6 ♂♂ on census plot at Ikroavik - also must a plot was hatching - 3 young + 1 pipping egg. The ♀ left the nest when I was still 10' + away - flew - a wide circle - landed about 40' from nest as I approached it - stood there giving a deep version of the RB rah, rah, rah, - more of a uh, uh, uh, ... She never came close while I was there

Holmes, R.
1962

Erolia melanotos

17 July Barrow, Alaska

Group of 3 with P Dunlin on beach ridge
so. of AACS. (2 ♂♂ - 1 ♀) 1 ♂ was
collected & was molting heavily,
(body only). 6 more ♂♂ were seen near
Meadow lakes.

18 July Flock of 5 ♂♂ on main beach
Just lake.

19 July Flock of 8-10 birds (3 ♀: 5-7 ♂) in No. Voth
feeding along pond margins & in shallow water-
black mud localities.

20 July Flock of 8 (5 ♀♀ - 3 ♂♂) seen near the Wannigan
inlet to Ikroavik. 15 or more groups feeding
in the lowland pools N. of JOK (about
half of them were ♀♀).

21 July Several small groups of 3-5 individuals
- mostly ♀♀ were encountered near Voth
& sunset Area & in Central Marsh.

22 July 20-30 birds feeding in marsh area in the south
end of Footprint Lake. - at least half
were ♂♂ - which have taken a
light gray color across the throat -
evidence of extensive body molt.
A flock of 16 seen north of the Wannigan
& scattered individuals, mostly ♀♀
were seen in marsh area between Foot-
print & Ikroavik. No young have been
noted - since the one nest hatched.

Holmes, R.
1962

E. melanotos

21.

24 July Barrow, Alaska

Flocks of 3 - 16 in the North Voth - Voth slough area. $\frac{2}{3}$ of these seemed to be ♀♀ - but not sure - the remaining $\frac{1}{3}$ ♂♂ are very late in leaving. Population estimate in this area 50♀ - 150♂. No young were seen - but one ♀ gave a mild distraction display.

A nest with 4 eggs located on the north-west side of Voth slough on a relatively flat grass-sedge plain (dry). The cup was well covered over with the grass-sedge blades & 90% hidden from above. It was lined with dry grass blades. The ♀ was present & gave an injury flutter over the ground along with a high pitched squeal. She did not return to the nest while I was there.

25 July 1 ♂ seen N. of mag. station - otherwise none were noted.

26 July None seen in or near Voth area except the 1 ♀ at the nest - where 2 of the eggs were pipping. The bird will probably be out tonight & tomorrow morning. The ♀ left the nest when I was 15' away - flew off giving the ♀ call note & stood 2' away while I looked into the nest cup - No distraction display.

Holmes, J.
1962

Erolia melanotos

28 July Barrow, Alaska

Two - appeared to be ♂♂ - seen just so. of Wohlsehlag Slough. One ♀ seen - central marsh - + 1 ♀ near Fresh Lake.

30 July Barrow, Alaska

None seen near Voth - Insect Area yesterday - no none today near Beach Ridge - + EISA lagoon.

31 July None seen near Voth - Insect Area - nor central marsh - beach ridge.

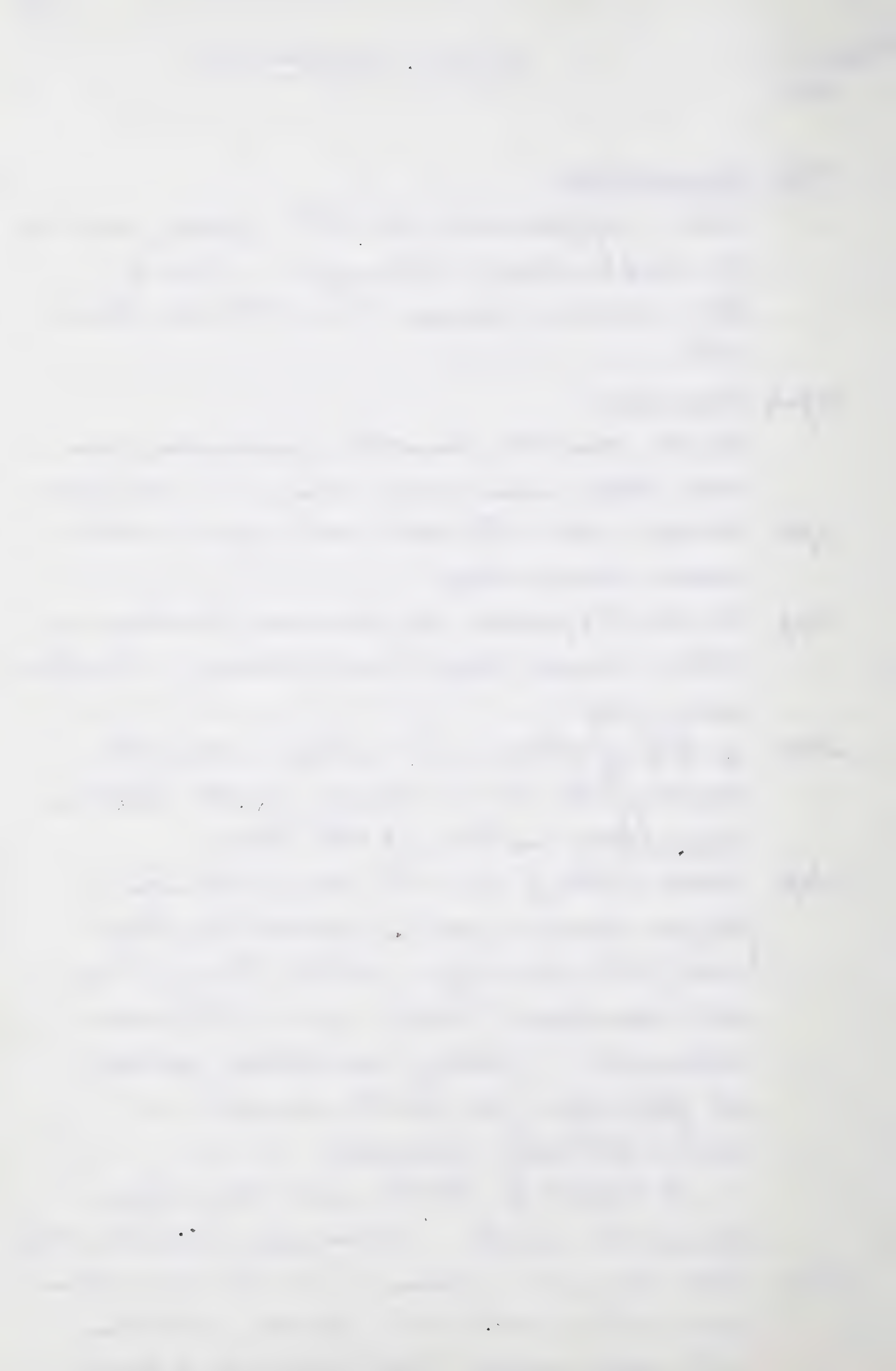
1 Aug 2 Adults (probably ♀♀) observed feeding on insect ridge slope (near drum). No other were seen -

2 Aug 3 ♀♀ feeding on the slope near the insect plots + 1 flying - well feathered immature in the N. Voth Area.

3 Aug Small flocks of 3 to 8 seen in the low - c. polygon area - south of Wohlsehlag Slough - west of the fertilizer plots. Most of these were immatures - only 2 or 3 ♀♀ were observed. Feeding was taking place at pond edge - in block marsh + in wet marshy locales.

A number of flocks were seen flying toward the west. (wind was from the west).

4 Aug More small groups of 3-5 immatures seen in the north Voth Area - feeding in the water-covered block marsh + troughs.



Holmes, R.
1962

Erolia melanotos

23

5 Aug Barrow, Alaska

Only 3 immatures seen near B.R.-81502 today - again there were in wet marsh areas?

6 Aug Single immature seen regularly today - nearly all were feeding in the wet polygon areas - at the edge of low-c. polygon pools. There were no birds S. + east of Gasline ridge - + in the north VOR Area.

9 Aug Peters Lake, Alaska

One seen on common between Peters + Schroeder Lake

12 Aug Barrow, Alaska

6 individuals seen in or near VOR marsh - all were young of the year.

13 Aug Aug 3 seen in Central marsh + SA wobbles area.

14 Aug ^{seen} Groups of 2-3 immatures seen on the NO. VOR + Britton's Areas

15 Aug Birds are still in groups of 1 to 5 - perhaps a total of 40 seen today between VOR - Ikroavik - Gasline ridge - Deuel ridge. A few were in Footprint (6-8) - but most were feeding in the wet polygon areas. All of these were young of the year - no sign of adults.

16 Aug - 1 in Britton's Area - 2 along south salt lagoon + none north of the Deuel ridge or in Central marsh.

Holmes, R
1962

Erolia melanotos

18 Aug Barrow, Alaska

Again scattered immatures (1 to 3) were seen in the wet marshy areas between beach ridge & Elson Lagoon. Probably not more than 25-30 birds were seen.

19 Aug - None seen toward The Point

20 Aug 3 on Britton's Grand Ponds & 3 more in the No. VOR Area - These are all immatures and from those collected recently - There is no molt occurring & the birds are putting on fat. - whereas imm. agrippas are molting & have very little fat stored.

21 Aug. One flock of 6 imm. - SW of Fuel Plot - in wet, low-c. polygon habitat. 4 more in mixed algae - melanotos - Pluvialis groups so. of Workshop. Four other sightings of individuals scattered in the water, marshy areas & the tundra.

22 Aug 4 imm. near used ponds (lower).

23 Aug 8-10 imm. seen today - Scattered in 21/35. fields - in wet marshy areas.

25 Aug About 10 seen between lat- & Skpik. - Gasline Ridge - all individuals all immatures - all feeding - wet marshy areas.

None seen yesterday near The Point - They all seem to stay in the tundra.

27 Aug - 3 seen SW of Gasline Ridge - imm.

Holmes, R.
1963

Calidris melanotos

27 May Barrow, Alaska

None seen on beachridge during afternoon. One ♂ came to investigate a wounded Sanderling near Wohlschlag Slough & then along the north shore / Wohlschlag, at least 4 ♂♂ & 3 ♀♀ were noted as follows - 1 ♂, 1 ♂ + 1 ♀, 1 ♂ + 2 ♀♀, 1 ♂. The 3 ♂♂, 1 ♀ indicated some courtship activity. The ♂ walked to her, cocked tail, drooped wings slightly, head up, throat bobs, but not inflated, gave several weak hor-hor-hor-hor in fast succession. The ♀ took flight. The ♂ followed behind given the gurgling call note.

Later, along the shore / EISM lagoon this same sequence was again seen. A 'pair' flying off in an erratic chase, low over theundra. Twice, males were seen to display aerially - flying low over theundra with wings held horizontally even with the back & throat pumping. Due to a light breeze, however, the sound was not heard. ∴ COURTSHIP & TERRITORIAL DISPLAYS are already evident on 27 May by birds living in these exposed areas & undra.

First individuals were seen by Mullen on 25 May (none had been seen on 23 May).

28 May 4 seen feeding together on bluff - west of family lagoon - 3 ♂♂ : 1 ♀. No display activity was noted.

Holmes, R.
1963

C. melanotos

2.

28 May Barrow Alaska

Three ♂♂ seen along bluff between Wohl + Cookpit sloughs - each was displaying - giving full hoots - with what looks like full developed air sacs. Chases (accompanied by gurgling chase note) were seen +/or heard frequently. Several times, the ♂♂ parted, each return to his own area, each performing an aerial flight display, low over the ground. Later, other at least semi-territorial encounters were seen - where during a chase, the chase would suddenly subside off + return to his area, only later to do more chases. ∴ signs of area attachment. No courtship seen today. - only 1 ♀ noted this evening.

29 May

1 ♂ along no. shore Wohl slough, feeding by jabbing at the surface of bluff tundra - low polygamy - occurred. Two seen along shore Blsm, north Wohl slough - 6 ♂♂ were spaced ~300 yds apart between Wohl + Cookpit - occasional chases were seen - but very little advertising by hoots +/or flights. ♂♂ either stood on small exposed mounds, with chest sassing or fed on the exposed tundra. Several more ♂ (1 with 2 eggs - ^{one of} which he started to display to + then she took flight + he followed (no gurgling call note given).

Holmes, R.
1963

3.

C. melanotos

29 May Barrow, Alaska

In evening - 3 ♂♂ (2 together, one alone)
on north shore / Wob. Slu. As the single ♂
approached a ♀, he cocked his tail, lowered
his antennae end + undulating. raised the
posterior part of the body, wings drooped
slightly, chest not expanded but sagging
low to the ground. He stood in the posture
for about 30-40 sec - with bill ~~open~~ open
about 5 mm - + gave a continuous scratchy
call - which can best be characterized
as ki-ki-ki-ki..... - which did not
vary in pitch or frequency



During
~~After~~ this time, the ♀ started walking
towards him, finally flew about 6'
+ landed a foot from him on a snow
bank. At this he turned + began
wobbling forward, swaying slightly
from side to side + changing in vocalization
into the modified hooting which a bird
on the ground emits. He gave about 10
sec. / this (however about 1 foot) + then the ♀
took flight before chase with a

Holmes, R.
1963

C. melanotos

4.

29 May Barrow, Alaska

call note - but not the gurgling chase note (which is heard in aggressive chases).

Sev. more ♂♂ - all seen as indiv - were along EISN-Lyon - 1 on Reed ridge. No aerial display seen - but evening was cold + "dark".

30 May 1 displaying along bluff to Uotuk Creek - no ♀ or other ♂♂ were noted.

AIR SAC. - in processing 2 ♂♂ - looked at esophagus - which when flattened was 15 mm across + 137 mm long. The diameter of 15 mm was ^{taken} near the cervical region, it tapered to 7 mm just in front of the proventriculus. If the esophagus was pinched about 8 cm from the mouth + air blown into it with a syringe-bulb - the diameter increased to 35 mm. The "texture" was very elastic + thin. Thus the esophagus may undergo some change at this time - which allow it to be inflated (or at least potentially). More checks (M + ♀ female + other species) is now needed.

31 May - 3 ♂♂ seen between Wabli Lookout - 1 aerial display seen - otherwise birds spent their time feeding.

Holmes, R.
1963

C. melanotos

5.

1 June Barrow, Alaska

2 ♂♂ seen between Brant Pt. + Wohlsehlay Slough
(1 collected) - no displaying. Feeding action
entirely by pick or jab - never going into soil more than
3 cm.

Four ♂♂ - 1 displaying aerially - between
Wohlsehlay + Oolipik - 1 ♀ seen in
company with ♂ - but he should no
courtship antics. - ♀ was collected -
she had an egg at 19 mm - almost
to the laying stage!

One ♂ seen - north level ridge - he
Beverage antennae. One ♂ seen
near Vok area. - no other in Vok - Inuit
local

2 June One ♂ seen in drum area + others scattered
in most large areas / tundra - so - Wohlseh
slough, 1 on Ikroavik census plot, several
near Oolipik census plot - He found
One ♀ seen + collected

3 June Five ♂♂ between Brant Pt + Wohlseh
along Elm (up) (4 + 1 ♀ collected).
Several (6+) scattered & sometime
displaying ♂♂ seen between Wohl +
Oolipik.

4 June Five (+) settled ♂♂ between Wohl +
Oolipik along bluff - several displays -
chases seen. One ♂ along north Wohl. -

Holmes, P.
1963

C. melanotos

4 June Barrow, Alaska

and only one ♂ seen in Beert ridge - he was near the 4 barrels - on north sector.

A stuffed ♂ + ♀ were placed on the edge of snow bank in the E. bluff. After a territorial display ♂ had chased other ♂♂ nearby he suddenly came in + landed about 30' from the models - He then walked closer - started strut in air up & down about 2 ft with chest half inflated - then apparently saw me or moved away - doing distinctive pecking - finally he moved off. Appears models - my work to look routine - well for this far.

5 June One seen near Voth Area - none at Britton's Area.

Between Brant Point + Polygon Point (so. end of removal plot) - only 1 ♂ was encountered (+ collected). At the mouth of Ubbelohde - 2 ♂♂ were fighting over territorial boundary.

6 June ♂♂ are seen wherever there are large (100 x 50 yds) patches of exposed tundra - i.e. at Voth area, Voth slough, + numerous indiv (110+) on Village Slough bluff - where the exposed area is 1 mile x 500 yds. In this latter locality, prelude was chasing + displaying fervently + 2♀♀

Holmes, R.
1963

C. melanotos

7.

6 June Barrow, Alaska

were seen in close proximity to each other
to a displaying ♂. However, the ♂ chased
off the ♀ (collected) & flew onto an
aerial chase of a neighboring ♂.

7 June

Two flocks encountered between wall &
coastal - along E/Sm bluff. - 1 of 14 ♀,
+ 1 of 9 ♀ + 2-3 ♂♂. Each 1/2 time was

frequently visited by - locally
settled ♂ who made numerous
attempts to court ♀♀ - with the
ground display - when the bird being
courted moved off. The ♂ would try another
♀ (3 in c row seen, 2 ^{in row} ^{climbing} _{see} _{Y X}).

Occasionally, the local ♂ would chase
a flock ♂ - but both would return to
the flock & feed for a few minutes
before any more activity took place.
There are first 5 (all 1 ♀♀ - to be seen
this year

Flock of 6 ♀♀ - several of which were
courted by a ♂ - on volcanic + bluff &
north.

8 June

Village Slu - Flock of 12 ♀♀ - feeding on dry grass
bluffs. - further in 1 ♂ seen feeding in close
assoc. with 2 ♀♀ - he tried to court one - &
the two took off in a chase - and the 2nd ♀
remaining to feed.

Holmes, R.
1963

C. melanotos

8

8 June Barrow, Alaska

Nest found with 4 eggs + inc ♀ on grass slope of village S. bluff. - nest laid with dry grass. ♀ flushed - landed 20' away + chased ^(chased down + followed) or attacked (ran towards) another feeding ♀ - 4X - Then a ♂ landed chased 1st ♀ for sev. feet ground ~~with~~ - He turned + began to court the feeding ♀ - He circled her in a fast wall with tail cocked (not spread), head up + jerking - which also involved the sagging air sac - gave the muffled hoots - one kept feeding + aft the ♂ circled her at close range (3-6") for about 30 - he ran at her - + a chase ^{ensued} followed. - it seems that a ♂ with a ♀ + nest on his territory (he had been displaying all around her area) - ran her off + was courting another. - Also ♀-♀ aggression

Nest checked half hour later. ♀ was incubating flew off when I was 70' away, circled behind me, landed gave a rather harsh rolled burrrrrrrrrt - but no posturing at this time - she led me away, giving no note

Flodif ♂ ♀ near Trepleme III A+B - 3 were counted in succession by 1 ♂, with about 10 sec intervals. He watched around one, she flew off, around another - etc.

Holmes, R.
1963

C. melanotos

9

8 June Barrow, Alaska

Elson Duff - many flocks along shore
of Elson & north side of Wohlsehby fl.
with following composition (12♀, 2♂) (6♀)
(16♀, 4♂) (12♀) (18♀, 6♂). The # of ♂♂
may not be accurate, since a territorially -
active ♂ was sent feed with the flock
for a period of time before counting
some of the ♀♀ - or chasing the other ♂♂.
Anyways, large flocks composed mostly
of ♀♀. Territorial ♂♂ were seen
courting flock ♀♀ regularly - no response
from ♀ noted. No screening
courting of different ♀♀ seen this
afternoon.

Flock of 9♀ - near Tropicum IIIA+B during
the evening. Flocks were everywhere
today - period of greatest PS activity.

9 June

No ♀ flock along beach + Fish Lagoon
today - scattered ♀♀ + displaying ♂♂;
none but none were in flocks
4♀ seen together on beach ridge. No courting
activity seen today.

10 June

1♂ + 1♀ taken from removal plot - several
seen along north shore of Wohlsehby. One
♂ responded well to ♂ model - by flying up
to it, landing nearby - going into a
"courtship" posture - tail up, wings slightly

Holmes, R.
1963

C. melanotos

10.

10 June Barrow, Alaska

drooped, head up + chest partly out - gave modified hoot. This lasted for a few seconds only - he then stood upright in alert aggressive posture; several necks were drawn to the back of the neck of the model. The bird then stood off, several inches - in the alert posture, with throat "sagging". He stood there looking at the model + at me (15' away) - as he did so, the throat sac would inflate slightly with each breath, it intakes - a throat bulged out, then deflates - exhale. Once when he was alarmed by my movements the sac filled with air, then deflated slowly. This could be easily seen - since the bird began tense when alarmed. & this was followed immediately by the air sac inflating.

Several other ♂♂ were tried to see if they would respond - they did not - perhaps he would scare them.

11 June Two ♂♂ chasing + displaying on beach ridge near former white - runway area. In one instance, two met in air, one following close behind the other + in fact the one behind caught up + physically banged the other with his side - which is slightly

Holmes, R.
1963

C. melanotos

11.

11 June Barrow, Alaska

The two separated until they were 6' apart + flew side by side and zigzagged + did some. They kept going higher & higher above the tundra until they disappeared for 540' (because of sun - but they must have been at least 150-200 feet above the ground). - At least one was giving the gargling chase note.

12 June - One settled on removal plot - seen 2 chase 3 individuals (presumed different birds - since none was chased to the north + only the territorial ♂ was seen to return) - which I believe was ♂ ♂. There was still a large area not occupied by Ps. - then they - there may still be unsettled ♂ ♂ moving in the area.

Only 1 displaying ♂ in AACS area ✓ he was on the grassy flat south of Traplines 9+10. - None seen NW of AACS. -

15 June This was the most abundant species - the Shrooik census plot + this year they are more dense than they have been in the last 4 years. See census sheet for #'s + territory sizes.

Holmes, R
1963

C. melanotos

15 June Barrow Alaska

Much display activity today & chases of ♂ by ♂ - in fact flying flights were low over the ground at 50-75' in the air. accompanying by gurgling chase note. When these crossed territorial boundaries, a reversal of aggression was ~~initiated~~ ^{initiated} & the birds change position in the chase. More often - the 2 chosen entered a third ♂'s territory - he took flight - & this went on until as many as 5 were involved in one instance. By the time the identity of individual birds was not determinable. Usually, they broke up into groups of 2's & females all settled back in their area.

These chases, as well as being caused by chases extending into adjoining territories - were seen when a ♀ was present. In this case, the ♂♂ chased after her & as she passed into other ♂'s territory - they all joined in. The ♀ would leave, the ♂♂ would come in behind her & land - she would dash at her or ~~at~~ at low altitude & all would take flight again. This was well accompanied by the gurgling chase note (= flatulent note H.F.A.P.) (this note is also given by ^{a single} ♂ to a ♀ in

Holmes, R.
1963

13.

C. melanotos

15 June Barrow, Alaska
chase.

One ♂ - one ♀ - ♀ leads - ♂ looks, she
flies 15' - leads - more follows - ch -
went - for 2 minutes, each seen
chase by ♂ - accompanied by
gurgling jolter note.

♂ on ground on mound in alert posture -
gave low guttural + harsh trill =
grrrrr (rolled). -

One \leq flock of 6 ♀♀ came across the plot -
with 3 ♂♂ following close behind. As
they moved through different tundra -
they attracted the occupant & seemed
to loose some of the other chases - who
probably returned to their area. - The
group moved onto the south.

On the way back to the thicket - on the
grassy slopes at the southwest corner
of Footprint Lake - a nest with 2
eggs was found. - The nest was
lined entirely with dry willow
(salix) leaves & was partially hidden
from view by arctic bladder grass
& sedge. The bird (♀) when flushed from
the nest, stood nearby - feeding
(displacement?), & a ♂ was feeding close
to her - but paid no direct attention to her.

Holmes, R.
1963

C. melanotos

14.

16 June Barrow, Alaska

Several displays near insect pond. One nest with 4 eggs + incubating ♀ located - side of small polygon, 30' north of Pond A. - moss-like curved edge - with scrub grass - eggs were 95% exposed - few grass blades projecting above - over eggs. ♀ fluttered off with ruffled tail feathers - wings out & the sides fluttering, tail fanned & depressed.

Twice the ♀ when feeding away from the nest (because of our presence) was courted by a ♂ who landed near her after he finished a territorial display. He walked up behind her - with tail cocked & wings drooped - giving the modified hoat = kur-aw-kuraw, She raised her posterior end slightly & walked on - the ♂ followed for several seconds - then took flight, chasing another ♂ - He returned about a minute later & repeated the same sequence. She paid no attention - except for the raising of the tail & wings & he never did mount her. - Conclusions - the fact that she was incubating a completed clutch & that he was still making sexual advances is significant.

Holmes, R.
1963

C. melanotos

15.

17 June Barrow, Alaska

Nest with 4 eggs + inc. ♀ near stake S. of
Shrubby - a deep depression near edge
of large polygon with grass blades for a
lining. Nest surrounded by moss + lichen -
tuft of grass - the latter provided about
40% cover for the eggs. The ♀ jumped
off when I was 50' away + gave no
distraction display. Also when she
returned when I was at the nest -
she did a rodent run + "head"
me away.

Earlier before the nest was discovered,
a ♂ flew over her doing a hooting
display. As he did so, she tilted her
body forward, with folded + wing
tips pointing at a 40° angle. The ♂
swooped low but kept on going - + landed
about 60' away. The ♀ straightened up -
but kept tail cocked for several seconds
before resuming normal feeding
posture. This may be a submissive
type posture - i.e. indicating that she already
has a full clutch of eggs - or even
an aggressive posture, (also - ♀ aggression
forward - ♂ is not known.

Second Nest found a plat - with 4 eggs
+ inc. ♀ - no distr. display. but as before.

RTII
1963

C. melanotos

16

17 June Barrow, Alaska

She gave a redoubt run as I began to leave the net. Located - full grass on center of 20' polygon. - air was lined with lub 1 grass

Several instances of ground contact between 2 ♂♂. Both would stand in upright alert posture - about 1-1½ feet apart. One would sidle up to the other - with head kept up but eyes turned toward opponent & then a sudden dash at the other - & both birds began fluttering ^{wing}, furrier around & on each other - bills pecking - in all the confusion, little detail could be seen - in the mock fighting. Sometimes the ♂♂ would walk side by side for several feet (~6' one time, 8' the other) before one would dash at the other. The fighting would end by one bird taking flight - the other following in close pursuit & giving the jabber note or occasionally a short sequence of the hooting. Once when they left the ground, they separated after flying 10' & each performed an aerial display over its own territory. These encounters took place at or near territory boundaries.

RTH
1963

C. melanotos

17

17 June Barrow, Alaska

At least 3 stragglers - i.e. unsettled ♂♂ - were observed moving independently through the plot. Each would be chased by successive ♀♀ for far, far down the plot. Where 1 ♂ would turn back for the chase the next would start.

On the return trip from Ikroavut - a nest with 2 eggs + an incubating ♀ was found in the south slope on beach ridge, 100 yds west of Na Meadow Lake. - in grass slope - eggs 75% covered. ♀ did not perform distraction display.

Tried the model of a ♂ mounted in abut posture - it was placed on a small mound within the ♂'s territory. Once he sighted it (took about 10 min) - he flew up, landed 6' away - ran rapidly toward the model, gave a jabber (on tape!) + a harsher hitting the model ~~with~~ on the neck with its bill. After about 2 sec, he stood off - looking at the model + at me (10' away) - after looking for another 20 sec - he flew off + performed a territorial display. He did not come back to the model.

RTT
1963

C. melanotos

18 June Barrow, Alaska

♀ a nest near insect plots (#3). Nest found by Stevens 20 yds southeast / 10.0 m. Trapline #1 - with 4 eggs & inc. ♀.

Considerable chasing activity seen So. of Voth's area. - One pair of 3 yearling ♂♂ noted - they were being chased by territorial ♂♂.

19 June

Nest located on northern end / southern branch of beaver ridge - (Nest PS #8) - with 3 eggs & inc. ♀. Limited cut grass + smothered down attached grass. ♀ did not do a distr. display.

♂ activity was up. Chase + display were seen commonly along the beaver ridge. One group of 4 - 1st yr ♂♂ - were seen feeding; they were freq. chased by settled ♂♂.

Two ♂♂ - ground - walking side by side both would go into head down agg. Posture - with wings moved out slightly from the body scapulars + back feathers ruffled - tail depressed + fanned - one would turn &



run at the other - who would then side step him + continue feeding. This would sometimes feel (or displacement feel) while in this posture. This would revert

Holmes, R.
1963

C. melanotos

19.

19 June Barrow, Alaska

to normal feeding posture - until for some reason - one would be stimulated to attack again. One then went into the upright posture - walked side by side.



Each bowed its head down to the horizontal & then back to the vertical - there was a bow above every zone & it was

performed very smoothly - as the head was lowered & returned forward rhythmically & gracefully, the then reverted into a hunched aggressive posture.

20 June Two ♂♂ fighting over boundary line & slope south of upland insect ponds. Fly back & forth - 40-20s each time - side by side - each displaying - with the booming actions - At the end of each 40-20s - the birds would do one of 3 things: 1) turn & repeat the above patrolling or 2) both turn in same direction, one individual chasing the other with the jabber note being given & finally separating, each displaying in its own territory, or 3) at the end, each put coverts pick off into his own area & display territorially.

Holmes, R.
1963

20.

C. melanotos

20 June Barrow, Alaska

Each was working one or more about 4 acres, but most of their time was spent working on the one boundary line (which seemed to be marked by a deep trough - running across the otherwise flat (i.e. low) slope).

Nut with 4 eggs + 1 egg found east of Footprint Road 10 yds south of Votk Creek - a flat grassy area - tall grass around nest given it 95% cover.

He did not do a detritus display.

21 June Ikroavik: In ground courtship. ♂ lands near ♀ - turns & walks toward her (his tail is cocked & - that the lateral gray tail feathers are conspicuous & the ~~white~~ ^{under} tail coverts are very obvious from the rear - wings are either held in normal resting position - slightly drooped - The head is up. The throat sagging & may be partially inflated)



As he walks toward her, ^{or off} _{her} he may sway slightly. At this time he gives a low pitched kurroo, kurroo, (up to about 10x -

The note is hoarse & almost grating & the bird's head moves in & out (or yes & down - well - slightly forward component). At this point the ♀ sometimes takes flight

RTA
1963

C. melanotos

21.

21 June Barrow, Alaska

after which the ♂ follows & may repeat the above performance when they land again. At times - The guttural kuron - note will turn into a liquid note - which is given rapidly - with the throat soon become partly enlarged & apparently involved in the production of the sound. This gottt, goott... note seems to be a modification of the aerial booming - (i.e. perhaps the full action of wing strokes is needed to fill the air sacs & then to expel the air). This burbly-gurgling note on the ground is given with very noticeable movement of the head & throat region - back & forth - (i.e. forward component is imp. here - head move from vertical to 45° forward & back) - bill is open during these acts.

Since the ♀ normally remains indifferent to these actions (The one described above had a ^{nearly} nest with 4 eggs & this occurs common when ♂ will make these actions to a ♀ with a complete clutch), she keeps on feeding. When the ♂ gets too close (D or whatever), she gives a call note & takes flight - he follows, giving the jabber chase note she takes, he follows. Sometimes when landing

1963

C. melanotos21 June Barrow, Alaska

he keeps one wing held at the vertical for $\frac{1}{2}$ sec - less. This wing is usually directed to the side & but may still have signal function to the ♀. This has been seen for 3 or 4 different birds. upon landing when chasing a ♀ (♂ chase?).

♀♀ feeding in grassy areas. were seen to lower themselves into the grass when a ♂ (either a territorial booming display or in chase of another ♂) came flying over.

One ♀ watched for 30 min - during this time she was continually pestered by 1-4 ♂♂. She would try to feed, then a ♂ would land near her & start ground courtship. If this went to completion (i.e. without disturbance from other ♂♂) - then she took flight - followed by the 1 ♂ - at this time the 2 were joined by 1-3 other ♂♂ for territorial adjoining territories & all would swoop around an area 16 acres (over the tent area of all 3 or 4 ♂♂) - low over the ground & circling to a 100' feet or more. The ♀ would land followed by the ♂ - who would run towards her & then she would hop up. land a few feet away & the whole thing would be repeated. The behavior of the ♂♂ in these chases is not clear. One ♂ (whether

RTT
1963

C. melanotos

21 June Barrow, Alaska

it is the same one or not is not known) seems to keep after the ♀ & at times the other ♂♂ seem to be chasing the first ♂ - I wouldn't be surprised if there was a change in crew - depending on the whose territory the bird was in [I feel that 1 ♂ may be after the ♀ - but they go into other ♂♂'s areas & they start chasing]. In flight & occasionally from the ground, the ♀ gave her call note: which allowed for her to be identified readily. As mentioned previously - she was involved in these chases for over 30 min (several times she ducked off & began to feed - while the ♂♂ chased each other - but they soon found her again). The amount of chasing in which she participated, the high frequency of her call notes & the lack of "hiding" in the grass - would suggest that she was an unmated bird - or at least had no clutch. Bird (♀) would chase - tend to resist ♂♂. by turning & facing them in an aggressive posture, hiding in the grass. when ♂♂ fly over, calling less frequently, & usually flying low - rarely in high altitude aerial chases.

RTH-
1963

C. melanotos

24.

21 June Barrow, Alaska

♂♂ will take after any ♀ which appears - whether they are "unmated" or off a nest. One ♀ today who was flushed from a nest - did a rodent run distraction display + was immediately "courted" by a ♂ (ground - precop. display). She ignored him - kept - in low over - flew short distances + ♀ kept through the grass. He made several attempts to court her - + then flew off + performed a territorial display.

At the north-east corner of the plot - the ♂ had a well-defined territory covering about 3-3½ acres. After watching him for awhile + recording several boundary conflicts with adjoining ♂♂. Suddenly - the ♂ began to perform a precopulatory display to a ♀ in the center of the territory - he did this twice + during the second time, I walked over to a known nest which was located in the territory + there was the inc. ♀ on the nest. So - here was a ♂ with a nesting ♀ on his territory - going through a precopulatory display to a second ♀ - only 200' away. When the ♀ flushed from the nest - she came in contact with the other ♀ - they

RTH
1963

C. melanotos

25.

21 June Barrow, Alaska

faced each other - one(?) went into a
tail up aggression posture. gave the ♀
call note + the other
flew off - followed by
the ♂. Presumably the one moving
off - was the non-nesting bird - the
aggressive one being the incubating ♀

NEST - PS # 10 - 30' off plat (11.0) - 4 eggs +
inc. ♀ - who was courted for sev. min. by
a lowly seated ♂. - Nest a slab
of polyg. - surrounded by moss +
a small clump of grass which
afforded about 15% cov. for the egg.

NEST - # 11 - 4 eggs. inc. ♀ - (8.0) -
in Arct. gnats on low poly on top - some
lupin dung - 50% covering by the
grass.

Two ♂♂ - chasing for several minutes.
over an area of 8 acres. The chases were
high above the ground - flying side by side +
then severing back + forth + making large
circles - jabber calls were given almost
constantly. After flying fast - they would
set their wings horizontally + down -
drooped + glided for several hundred
feet, descending + landing. On the ground,
they both went into a hunched posture,

Holmes, R.
1963

C. melanotos

26.

21 June Barrow, Alaska

running side by side - pecking at the ground - (no upright postures seen) - then after covering ~ 10' - they would resume the high aerial chasing. This went on for 2 hours or more - & these flights were over territories which were being defended by ♂♂ - low to the ground (& under these high flyers) - No other chases were involved. Later - These 2 were seen close at hand & they appeared to be young birds.

Tail action in aerially displaying ♂♂ seem to be involved in signal functions. In flight, the tail is spread & is rotated back & forth during the flight so that the light gray outer section & the white tail coverts can be seen from the side. This action - given during the glide component of the display & may also function as a rudder.

The density of birds today was just as great if not greater than last time. There were 2 flocks of wandering ♂♂ in the plot (5 + 4) - which seemed to be young males. Also - 3 of the settled birds had unusual postures - i.e. First year.

Holmes, R
1963

C. melanotos

22 June Barrow, Alaska

Some chasing by territorial ♂♂ on Pithers' Census plot - but activity was light. Childs reported a flock of 4-5 ♂♂ near Trylon 9x10 - in the evening.

23 June ~~Area~~^{Two} ♂♂ & removed plot - ^{one} was removed. -

Only 2-3 settled ♂♂ along the mark show of noticeably + very little display activity. I found the largest ♂ model - next to - mirror. One ♂ came in + attacked (struck at head with its beak after jumping on its back - very "dangerous" action): threw - almost demolishing the model, over him. The mirror seems to hold some attraction, although he never did get close^{to it} than 5 feet. He would look - but divert, then pick at the ground + move off feeding, and return to the previous area. Finally, he walked toward the mirror - but about 1 foot to the side - so as to pass the mirror & go behind it. He then walked back until he was again 5' - from. The bird was heart & seemed to have quite an attachment to the mirror (the model to the mirror was flat - the ground).

Holmes, R.
1963

28

C. melanotos

23 June Barrow, Alaska

The only note given during these sequences was a jubb note (which occurs on the ground & during - chase - in the air - oft another bird) & the guttural kuroo - note which is usually given during the pre-polyth display. - The form - he was in an alert posture - about 3' above the model - following this was the first attack - during which there was no sound. Bird left 2x & displ. territorial following chases.

No flock seen this afternoon - but in the evenings, 1 of 10, & 1 of 15 were seen No. 1 Voth Ave - They merged in flight on one occasion - but the separate. - All appeared to be ♂♂. Display activity in Voth Ave - was non-existent this evening.

24 June

No display at Voth plob - 2 chases (probably included) were noted. Flock of 47 ♂♂. seen ridge - halfway between Voth & Britch Areas. They were all - ground^{top} - save ♂♂ seemed to have well-developed throats - i.e. may be some immature ♂♂ leaving their parents' ^{are now} mixed with the yearling ♂♂ which

RT74
1963

C. melanotos

29.

24 June Barrow, Alaska

making the remainder of the flocks.
When the group flew - then split into
3 - flocks of about equal size.

25 June Trip to Ikroavik: several groups of 2, 3, or 4 ♂♂
seen along gas well road, north of Footprints
+ 1 group of 3 in Footprints. Along the
stream empty into the northwest
corner of Ikroavik Lake - there was a
flock of 14 ♂♂ (+ 1 Limnodromus scol.).
One flock of 5 ♂♂ on the plat - no other
groups seen - there was no chaos
on the census plot due to flocks but - as
reported by Pipelle for kestrel rips.
All these males today appeared to be
first year birds.

I call note is variable - but as a
"musical" note, liquid in quality - can be drawn
as a chirp, chirp - or choop or cheer.

♂ on ground was forced to move
repeatedly (10x+). After 2 min. he became
very belligerent + defiant, + would stand
his ground until I was less than 5
feet away. At the time, he gave a call
note - kur-raw, - 8-10x - the
note resembled the call given in the
ground courtship display. In this case -
there was no movement of the head.

RTH
1963

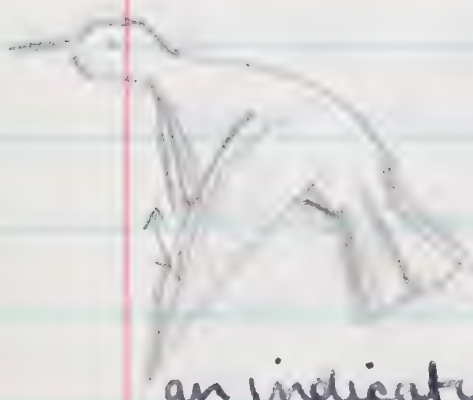
C. melanotos

30.

25 June Barrow, Alaska

Throat - but the bird was in semi-alert posture + the bill was wide open. This may have been a version of the jabber given on the ground - but it more closely resembled the call given as a preliminary to the ground rooting - or courtship.

Ground-located ~~active~~ contact between ♂♂ were common today. Both the upright posture (with tail depressed + fanned + the bird was looking + preening + the sudden dashes) + the hunched posture (with both feathers ruffled, head forward + pushed into the body) were involved in these ground encounters. Twice the birds were seen to fly a flutter into the air + fly side by side for several feet. In doing this - they kept the tail at a lowered position + partly fanned - thus giving a low-in-the-abdomen appearance in flight.



- The wings are fluttered - rapidly + noisily. + the bird will rise more than 10' above the ground. This is probably an indication of aggressive action carried into flight.

Only one ground courtship sequence noted today. In this case, the ♂ at

RT14
1963

C. melanotos

31.

25 June Barrow, Alaska

nest #5. had moved off the nest. & was standing about 60' away from the nest cup. The ♂ flew in, landed, kept one wing at the vertical (pointing off to the side), during the time - the tail raised to a half-cocked position. The wing was then lowered (the latter) - & the bird began calling kurrow - aft 3 - the ♀ flew off - the ♂ flew off & displayed territorially.

Activity was low today & somewhat confusing. ♂♂ were not defending their areas as vigorously as they were 4 days ago. ♂♂ from adjacent territories would come far across the boundary - before he would be chased. There was true with several individual ♂♂ who were moving through the area. In one case, 3 ♂♂ were feeding, near a 10' of dead otter, aft about 5 min, one ♂ - who apparently was the occupant - chased out the other 2. - Thus, there seems to be a more casual atmosphere in the pectoral population & the territorial system is beginning to break down. Also, there was a decrease in activity during the day - so that by 1800. hardly any bird was displaying.

RTH
1963

C. melanotos

32.

25 June Barrow, Alaska

This prevented my obtaining a good census on the north 40-acre.

26 June Several flocks along Elson Lagoon between Brant Pt & Coochichig Slough - 5 or 6 groups 9, 7, 7, 5 + sev / 2-3. all seemed to be ♂♂. Some chasing by settled birds was evident but the chases were not prolonged or exceedingly aggressive. The ♂ chased & flushed the flock - then would return to his feeding activities & after the flock would also return to the same general area and after a minute or so, the ♂ would again chase & repeat the above sequence.

Occasionally during the return, the settled ♂ would make a partial circuit of his territory, performing the aerial whooping display.

These ♂♂ were spaced out along the north shore of Elson. one was chasing a flock of 4 ♂♂. Scattered group of 2-4 were along the central marsh side of beach ridge.

In afternoon, a flock of 6, 4, & sev 3-4 ♂♂ in area south of 1st Ave & No. 1 Fort front. Again, these birds were being chased by locally settled ♂♂.

A ♀ flushed in grass - she flew 10' land, down to pick something at ground - ♂ flew to

RTA
1965

E. melanotos

33

26 ~~May~~ ^{June} Barrow, Alaska

her, landing about 12" away. She raised tail & rump into air & fanned him - he took flight & made a wide $\frac{1}{2}$ -circle & flew back over her - 3-5' above her - & was hooting as he passed over. This display has been observed several times in the last few days but its significance wasn't apparent until today. The ♀ aggressive posture may inform the ♂ that she is already on eggs & is no longer receptive (she was collected & had almost laid a full clutch). If she flies off & returns - given the warning display. Each time she happens he passes immediately above her. This is the only display which presupp. that I have seen in the species between a ♂ & ♀. I assume, it may acknowledge that ~~she~~ he is aware of her presence.

1 ♀ collected with 1 egg laid & 3 more to go.

27 ~~May~~ ^{June}

1 flock / 8 on North beach ridge - 2 collected
No display activity - bad weather

28 June

One flock of 35 ♂♂ south of gasline ridge - numerous groups of 2-5 ♂♂ between gasline & beach ridges. Several ♀♀ were observed & judging by their behavior, they probably were flushed from nests. Only 1 chase of a ♀ by a flock of ♂♂ was noted.

RTH
1963

84.

E. melanotos

28 June Barrow, Alaska

Some chasing was noted within the flocks; this consisted of chasing 1 1♂ by another - usually one bird giving the jabber note.

In afternoon - only 3 hooting displays were heard near the census plots & all of these seemed to be given by one ♂. Once after a chase, a ♂ just flew back over his territory, 5' over the ground - but did not display. Finally, he landed without ever displaying - this type of activity is now on the decrease.

29 June - Census plot. Activity was noticeably reduced today. Many of the ♂♂ no longer showed their "sassy" nature, few were sitting in the sentinel position on mounds, & few if any performed an aerial hooting display. When the latter was given it was always directed to a ♀ on the ground - i.e. the ♂ flew a foot or two above her giving the whooping sound. The only other calls heard from ♂♂ - were the ground growls, of a ♂ who had been disturbed or the jabber while in chase. At the end of a chase, the aggressor would return and land & begin feeding. No display at this point - when there formerly had been some.

Holmes, R.
1963

E. melanotos

35.

29 June Barrow, Alaska

(when hooting was done. It was weak & off-key - apparently the birds are loosing some of the control over the air sacs, or something of this nature. Also - seen ♂♂ on the ground - made me realize that the Sagg, nature of the throat is beginning to disappear.)

Concomitant with the above changes, the defense of territory was weak. A settled ♂ would tolerate a group of 3-5 ♂♂ on his territory & sometimes no aggressive actions took place. At other times, the ♂ oft. subordinate would come into direct contact with one of the wanderers & would chase him a few whole groups until they moved on. In one case, the flock would settle in the same area and then after some time the subordinate the terr. ♂ gave up & fed with them. Later, when they moved on - the territorial ♂ stayed.

Several ground-to-ground encounters were again noted. In the alert upright fore-to-fore posture - the ♂♂ legs are stretched until they are straight. The head is kept in a straight line with the body & the birds look at each other - out of the "corner" of their eyes.

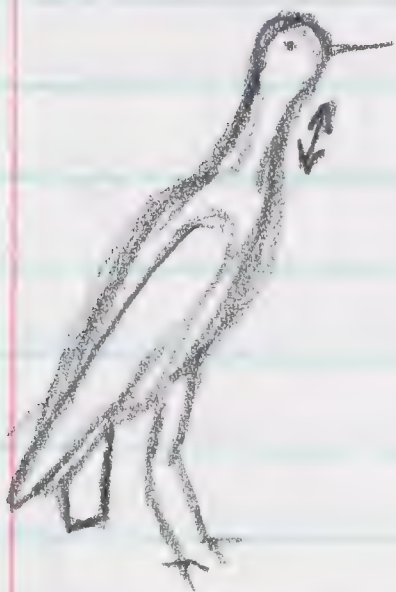
Holmes,
1963

36

E. melanotos

29 June Barrow, Alaska

Suddenly, the head would drop down & swing off to the side in one fast motion - as if making an attempt to attack - but it is the stalk. The upright posture is again attained & the 2 birds move a side to side; & then down the head lowering



(The feathers are sleeked during this action - the tail is depressed (degree of fanning?). The bird moves along - looks to the side - with head turned slightly but way - the the head dipping - in both up & down & side ways forwards

to opponents.

♀ chasing was still in evidence - & many ♀♀ were noted - most of them were evidently from nests - but several "lone" ones seemed to be hanging around - these may be late nesters. The ♀ chasing today was not prolonged as it has been & the ♀♀ in general resisted the attention of the ♂ by giving the near-end aggressive posture. In these encounters, the ♂ would land near the ♀ - walk - run up to her - with head partly forward & usually giving the jabber. At the point - the ♀♀ would

Holmes, R.
1963

E. melanotos

29 June Barrow, Alaska

posture or would jump into the air (1-2') fluttering their wings, giving their call note & landing nearby. The ♂ usually ran to her & this would be repeated again. Only twice, did I see a ♂ go into the ground courtship posture - in both cases it was toward a ♀ with a complete clutch - who responded with the tail raising - aggr. - display.

Flocks were more numerous during the early part / the census today & fewer were noticed in the afternoon. There were groups of 2-5 ♂♂ moving slowly on the tundra - feeding as they went - & being chased, rather weakly, by settled males.

All nests previously found in the plot were intact. All ♀♀ except 1 - smacked off the nest before I was anywhere near. The one exception was at 8:0 - where ♀ remained on the nest until I was 5' away - at which she popped off - and after a fluttering flight - landed away - She then gave a distraction display with wings extended horizontally, tail depressed & fanned - The bird then huffed the ground & went shuffling off through the grass giving a high pitched squeaking note. The wings would be brought in & then extended again as the bird moved

Holmes
1963

E. melanotos

38.

July Barrow, Alaska

Some display activity seen along south side of
gasline ridge. One ♂ performed the
ground courtship display constantly to
a ♀ - who did not give him the tail-up
aggressive posture so she may not have
been on eggs. The ♂ landed near her -
walked toward her - head up but forward,
chest sagging, perhaps partially inflated -
the head was jerked up & down (while
pointing straight ahead) - gave kurau-
kurau - 6x - then changed into the
gurgling hoot or whoop. At this the ♀



ran off - he followed
her with his tail cocked -
& in the forward position -
giving a hissing
noise - pssss - pssss -

This hiss was heard 3x -

from the ♂ while he was in this posture behind
or at the side of the ♀ - at these times - no other
calls were given. In two cases - the hen

followed the known - the modified
heating & once it was given from
the modified boat (or the obscure /
the known call). This may be a result of
the adv. season & its infl. in vocabulary -
since this call has not been heard previously

RTT
1963

39.

E. melanotos

1 July Barrow, Alaska

This season. One or two ♂ & ♀ flew short distance (10' ±) during which ♂ gave 1 to several low coo notes. The ♂ would follow closely usually uttering the jabber. Aft 2-3 min, the ♂ flew off to chase a group of 4 ♂♂. He did not return during my stay here.

Several flocks of ♂♂ noted - 1 of 4, 1 of 11 - & several of 3-5. The birds were mostly along the base of the beach ridge - but the north & south sides.

2 July Small group of 3-4 along base of beach ridge in central manner - along Ditch's plot. No display activity, (except 1 chase - ♂-♂ - with jabber) - in insect area. Display activity is rapidly decreasing.

One nest with 7 eggs found 20 yds north of north side - in line with Brown's barnyard.

3 July Throaick - Display activity was further reduced today & some of the previous defenders, ♂♂ have now left. Only 7 active ♂♂ (X a common sight) were down and denied displays - whereas a week ago there were almost 3x this number.

RTH
1963

E. melanotos

40.

3 July Barrow, Alaska

Several hooting displays were performed & in every case - the ♂ bowed over & ♀ crouched in the grass. Territorial flights were infrequent but 1 ♂ (NW corner / S.O. plot) patrolled after a hooting display - in the F-27 glide posture. Three ground displays - to ♀ were seen - 1 by the ♂ at 10.0 - to ♀ from nest #10 - she has been perched by the same ♂ for over two weeks now (i.e. since outworn found on 6.21 & each time I have gone to the plot since then - he has performed this ground display behavior towards her -

One aerial chase / 1 ♀ to 3 ♂ was noted - at least 1 ♂ was jabbering. Most ♀♀ when located or flushed from the nest were not bothered by ♂♂ - since many ♂♂ have departed. No ♂ flocks - but 1 group of 3 ♀♀ was noted near 9.0 - feeding together. In this last case - I have flushed a ♀ from a nearby nest & she had led me away from the nest into the area where these 3 ♀ were feeding. At this point, the nest ♀ began to chase the others - lowered head, ruffled back feathers, tail depressed & fanned + back hunched - she then dashed at the other ♀♀ - making

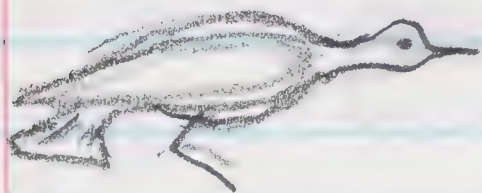
RTH
1968

E. melanotos

41

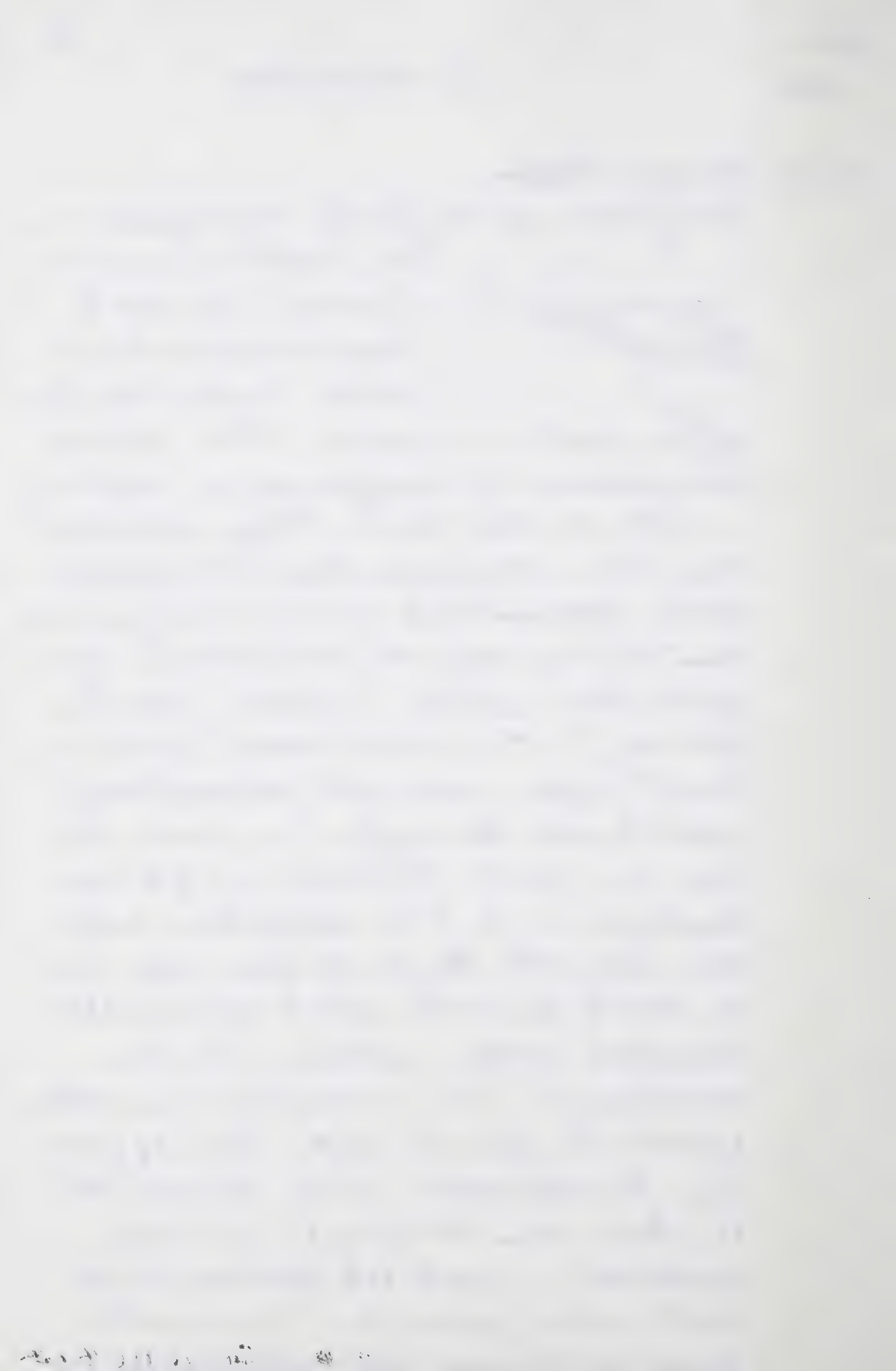
3 July Barrow, Alaska

They fluff up & fly off a few yards when they settled to summer feeding. The nest & nest - supplanting the other - until they flew



off the east in a group. They showed no posturing of any aggressive nature.

Later - a nest with 4 eggs was found near 0.2 in dry grass (Poa & Arctophila) - which produced 20% cover for the eggs. The nest (#17) is only 150' from nest #5. Both are located within what was the territory of 1 ♂ (at NE corner / plot & the ♂ - (who was not present today) was the one seen earlier - with the 14 - the nest & ^{with} the other in pre-egg displays. A ♀-♀ interaction noted here - when both ♀♀ were off their nests. The one closer to the nest went into the above described ♀-agg. actions - the other maintained the rear-end-up position - which a ♀ gives to ♂♂. The aggressive (from the older nest - #5) dashed at the other - who took flight. A chase followed - with #5 following #17 ♀ - both were giving the ♀ call note. In all #5 turned back - while the other bird



Holmes, R.
1963

S. melanotos

3 July Barrow, Alaska

made a landing - both birds began feeding about 10 yds apart.

PS - N #14 - near 17.3 - a moss-covered polygon - with scattered grass + sedge - 4 eggs were 10% covered - no distr. display by incubating ♀.

PS - N #15 - near 15.4 - mossy mound with scattered grass clump - gives 10% cover to eggs - No. d. display - but did perform a rodent run. A ♂ in the area did a hooting display over the ♀.

PS - N #16 - near 21.1 - 4 eggs + inc. ♀ - no d.d. - on small mound in trough between 2 large grass-covered polygons - 20% cover.

On return trip - checked nest #2 - which was empty with no evidence of ♂ or eggs - by herbaceous debris - Nest couldn't have hatched yet - so it may have been lost to predation. The nest cup was full of willow leaves - mostly *Salix pulchra* - but a few of *S. rotundifolia*. By the time the cup was empty - there was a pile of leaves 2" high + 3" in diameter + 1 feather - no grass blades.

At nest #9 - the ♀ did a distraction

Holmes R
1963

E. melanotos

43

3 July Barrow, Alaska

display & rodent run - but the cup was empty -
The young must have been nearby.

4 July Consumed Pitelka's plot & found several^(?) of his PS
nests - all were covered with 1-3" of snow -
In both cases, the ♀♀ were on the nest under
the snow. As I approached - I could hear
a rustling of the bird & then a head
would pop up through the snow &
finally, the bird would jump off the
nest & go off in distraction display. They
must have been on the nest since late
yesterday afternoon - when the snow
began to fall.

Four chase / ♀♀ - 1 by 30' & another
by 40' were noted - the ♂♂ gave the
jabber note - the ♀♀ the ♀ call note. The ♀♀ in
the chases were not off nests known to me -
& they were not seen on the ground.

Nest #8 - checked - the ♀ was partly on the
nest - at least her head was down toward
the eggs - her neck and chicken up in the air -
I walked up to her & picked her up - put a
band on her & let her go. - She did a weak
distraction display & then stood off -
nervously. One egg was partially cracked - i.e.
either starting to hatch - or she had broken it -
Her - she felt cold - so maybe she had

Holmes, R
1963

E. melanotos

44

5 July Barrow, Alaska

not been able to get to the eggs - because of the snow layer.

No flocks noted - except the 3+40s chasing ♀♀.

No other males seen in the plot besides the above - no displaying of any kind.

In afternoon - no flocks seen in Britton-Voth Area - 1 ♀ with 3 young - which were just out of the nest - 2 young were collected. The third banded. A

nest with 4 eggs + one ♀ in Voth Area - purple - sunken

In grass - given eggs - 70% covered - on small mound - new large high-center polygons. No other ♀s noted - no ♂ seen at all.

Chick + Mule argued small group (3-5) 1 ♂♂ pectorals near gulch ridge. They shot 5 + 15 + 18 which were feeding together.

6 July Nest #6 Smashed by creased - egg was not near hatching - about half- $\frac{2}{3}$ developed. Several ♀s seen - + there were not chased by anyone. In the same area - on 3 group 1 ♂♂ - 1 ♀ 4, 1 ♀ 6, 1 ♀ 3 - which were feeding. When flushed they flew up + moved off together - No display or chasing then was seen.

Nest #7 - was intact -

Holmes, R.
1963

E. melanotos

45.

7 July

Barrow, Alaska

Two ♂♂ were still displaying - with hoots + brief glides. Two or three chase / ♀ by ♂♂ were seen + these were accompanied by jabber calls. The ground courtships were seen + 2-3 burrow-calls were heard. The cries seen were weak; ~~the~~ lasting only a sec. or two.

The number of ♀♀ was confusing - I don't believe they were all for nests & in two or three cases - there were flocks of 2-3 or 4 ♀♀ - see census sheets. There were also flocks of ♂♂ along the plat.

♀♀ chased other ♀♀ - the latter were believed not to be nesters. - no ground aggression was seen. - there were all supplantor action + aerial chase. ♀♀ were also noted chase ♂♂ (from flocks). ^{- 1 per-up action on ground - chased followed.} She would fly aft to him - from the ♀ case note - the turn + go back to the corner of the nest. This was noted 4x during the day.

Nests. #5 - gone - hatched July 5-6

#17 - present - all 4 eggs, 1/2 ♀

#4 - hatching - 3 1/2 + 1 E

#11 - 4 eggs + 1

#25 - 4 eggs + 1 - new S.O. - 102. com - on

low 10 x 5' mound - moss + pine cone

#14 - empty - hatched July 5-6

#15 - with 4 eggs + 1 ♀

RTH
1962

E. melanotos

46.

7 July

Barrow, Alaska

N-#26 - new 14.0 - 4 eggs + ♀ - 70% cover -
on east slope - tall Eriophorum vaginatum
+ some Poa

N#16 - 4 eggs + ♀ - 1 egg smashed in handling

8 July

No displaying ♂♂ seen - In beak ridge
census plot - several flocks of ♂♂ + 1 ♀
mixed ♂ + ♀ were noted. No ♀ chase
or ♂ chasing by ♀ was noted. No song
courtships - There was no evidence of
settled ♂♂.

Nest #18 - 4 eggs + ♀

N#8 - 3 eggs - warm

Nest #19 - 4 eggs + ♀

Nest #20 - 4 eggs + ♀

Nest #21 - empty - not present 7.5 LHA.

" 22 - 3 eggs - warm

Nest #24 + 17 - intact

located # 27 - 60' east of gas well road +
100 yds south of Voth Creek - 35 yds
from PS N#12 - which was still active
Nest with 2% cover - surrounded by Carex + Arctostaphylos
+ Poa - 4 eggs - ♀ gave moderate
stray' distraction display.

No ♂♂ in the area - Voth - present.

9 July

Nest # 28 - 50' W of gas well road - 50 yds south of
Voth area - creek - on flat ground - with 10%
cover of Eriophorum + Parnassia - 4 eggs

Holmes
1967

47.

C. melanotos

9 July

Ikroavik - Barrow, Alaska

Nest #29 - near 9.0 - 4 eggs - in lutzak - Eriophora -
with cover 10% - 120' from nest #11

Nest #30 - near 7.1 - 4 eggs + ♀ - no d.d. -
on grass - lichen covered polygon - 5% cover

Nest #31 - near 3.0 - 4 eggs - side / low c
polygon (moss-lichen & covered) - nest ~
clump of Poa - 5% cover - 40' & east of 3.0. off plot

Nest #32 - near 4.3 - 4 eggs - ♀ - on moss-lichen
polygon - under 10% - no cover except shadow -

Nest #33 - near 2.1 - nest with 4 eggs -
polygon in Arctostaphylos - grass & lichen under
cup - 10% cover

Nest #34 - near 2.1 - 4 eggs - on polygon
top - surrounded by Poa - 10% cover

Nest #35 - 4 eggs - near 5.2 - polygon
side - grass lined. . moss - Poa - tannic.
- Eriophora surround cup - grass 70% cover

Nest #36 - between 8.1 & 9.1 - 34 normal
eggs + 1 $\frac{1}{3}$ normal size - but with same
coloration & warm. . on edge of small
polygon in clump of grass - 5% cover ^{- 150' from #29}

Display activity was limited today to 1
series of whoops - given weakly by ♂♂
off the plot. Too jobber call - given -
there were also heard. No ♂♂ were located
or "settled" on the plot: also occasional
individuals were seen - there usually were Wandlows.

1

~~Law-erk-erk~~

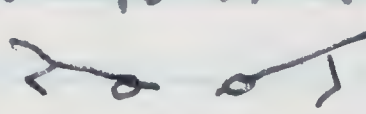
Holmes, R.
1963

48

C. melanotos

9 July Barrow, Alaska

On the Shrook c. plot, flocks of the following
size were recorded: 1 of 45 (mostly ♂,
perhaps sev. ♀); 1 of 3 ♀, 1 of 4 ♂, 1 of 20 (mostly
♂ - ♀?), 1 of 2 ♂, + 1 of 4 ♂. There would feed
for a while & in several cases come forward to
a ♀ flushed from a nest. She would
remain somewhat separate. In 2 cases,
a ♀ was seen to chase a ♂. Both times,
she raised her head (incl. tail & folded wing
tips), lowered chest toward ground,
gave a call note & dashed at the ♂ - He took
flight, gave the hoarse ♂ call note - she flew
after him for 30-40' - & c chase & she
returned. The ♂♂ in these encounters had
made no advance toward the ♀ & were
not believed to have been settled in the
area. She may did not appear to be
in good breeding condition - as judged by
ovot development & behaviorism. Probably
the ♀♀ were either chased from away
from the nest - or being this, as an
escape for a aggressive drive - after
having been driven from the nest.

One ♀-♀ encounter noted where each
postured  - four to five - 6"
apart, then one dashed at the other & a
short chase - with the birds following close

Carroll 10/2

Burr Broom K/100

Wormhole - LOS

Holmes
1963

C. melanotos

49.

9 July Barrow, Alaska

behind the other, but given the 4 call note, follows. One the return to the nest - the other landed. In the case - but were bird nests nearby (150' apart - near 8.0-9.0).

Several non-nesting - individual ♀♀ were encountered during the day. When flushed, they would give the call note & the fly - 100 yds, sometimes out of sight. While on the ground, they showed no behavioral signs of having a nest (i.e. "secretive" behavior - slow deliberate movements & pecking for food, no crouching, gave call when starting to fly - rather than wait until far away from nest, etc.).

10 July

Three flocks (♂♂) along parking strip - sizes, 4, 6, 4. All feeding actively - sev. that were collected yesterday were molting body feathers & were accumulating body fat. The development of the neck region was still evident from the inside - i.e. fatty & vascularized, but appearance from external showed no saggingness & now with the molt going on, the coloration of the throat is being lost & is becoming lighter. No more seen - both in afternoon.

Holmes
1967

E. melanotos

30.

11 July Panow, Alaska

Omenut has hatched a brood ridge census plot - all others were intact - no pipping. Nest

8 - nest 1 the plot was empty - no sign

♀ - probably has hatched - last day or so. - All were not destroyed by cold after all.

12 July None seen along north brood ridge or along the south shore of north salt lagoon.

In afternoon - Nests # 24, 27, 12 were intact & still being incubated. N. # 28 had hatched - probably day before yesterday - since one of the young collected weighed 18g. The ♀ & the chick were about 100 yds south of the nest site.

Two other broods were encountered - one with 3 day-old chick (♀ + the 3 were collected) & a ♀ with 2 young - 2-3 day old - 1 young collected.

A flock of 4 ♂ on south side of brood ridge - E of Uoth & a flock of 12 ♂ + 1 ♀ on the east side of Uoth creek.

13 July Nests along gasline road intact - found 1 ♀ + 4 young along the west side of Footprint - these were collected. E of the plot - Nest + 2 young which I banded on 7/13 were about 200 yds from the site I banded - Nest empty.

On the Ikroavik census plot, N # ~~16~~ 17,

RTT
1963

E. melanotos

51.

13 July Barrow, Alaska

#29 (only 1 cold egg present - but ♀ + probably
chicks were nearly) were empty -
The remainder all had the full complement
of eggs. On some - the ♂ were not present
& in fact were not even seen. - all the
eggs were warm. Thus, there are
still complicating factors about finding
all the nests - since the ♂ must
move quite a distance from their
nests when feeding.

For nests were found

#37 - near 23.3 - with 4 eggs + ♀ -
on moss-grass polygon with 10% cover of
grass & sedge.

#38 - near 7.2 - with 4 eggs + ♀ -
on small mound - moss + grass-sedge -
5% cover.

No display activity - no chasing - no
jabber calls. Several small groups of
♂♂ & 1 ♂ + ♀ were here & there on
the plot.

14 July Pectoral nests on peat ridge plot &
near Voth & 6 Voth all intact & been
incubated. A new nest was located
at the west end of Voth Creek - due E 1 D. 0.1
Trough 1 V A - B. 1 Erythronium virginicum, no
same 30% cover - 2 eggs - warm. No other pairs.

Holmes, R
1963

E. melanotos

52.

15 July Barrow, Alaska

No flocks today & no males - (apparently all have departed). Several "broods" & ♀ were encountered & 1 nest was discovered with 4 eggs - south side of gas line ridge - surrounded by Eriophorum & Carex - given 30% cover. ♀ was present. Nest #7 was empty - a ♀? was nearby & the nest probably has been in the last week.

16 July Nest #19 had 4 young - just out of the egg; #20 was still being incubated. (At #19 - The ♀ was brooding the young in the nest cup - The last young probably had left the egg 12 hr or more before).

Nest #12 was empty - must have hatched yesterday - no sign of birds. Nest #27 was still being incubated. - Nest #24 - 3 young & 1 prepping egg.

At Nest #31 - There were still 2 eggs but they seemed cold - a ♀ was in the vicinity (At 3rd egg - intact - was laying about 2' away - down a slope). Several other ♀♀ were noticed along the west side of Voth Slough. Two ♂♂ were feeding in the grassy flat south of Voth Area.

17 July Several groups of 2-3 ♂♂ in grassy & polygon area between Voth & North end of Foxmouth Lake. Also - No census about

Holmes
1963

53

C. melanotos

17 July Barrow, Alaska

Today, scattered individuals were seen. Also - flocks of ♂♂ + ♀♀ (112♂, 4♀) were noted. In addition, groups of 2-6 ♀♀ were also noted. These added to the confusion in the plot series. Sometimes it was difficult to separate breeding females from non-breeding or non-settled birds. In one area - there were so many ♀♀ - it was impossible to tell who was who. A brooding ♀ walks differently - usually the posterior end is sticking up into the air over lowering the chest. In the posture - the bird then waddles more. Also - brooding birds will not fly off a nest + give a call note at the same time - as she is silent for several seconds until she has moved a certain distance from the nest. - It is just the opposite with non-settled birds. Also the latter would take flight + go out of sight - (frustrating, after watching one for 15 min - waiting for her to go back to the nest!). Also, the ♀ with a nest + I think more often when they have chicks - gives a different call note - in addition to the regular ♀ call note. One is a rolled + rather guttural trill - which is strikingly similar to the vocalization of a turnstone - in

RTH
1963

E. melanotos

54

17 July Barrow, Alaska

diagram it looks like this + is rather hard
p. chel-ik-ik-ik-ik-ik

or sharp. . She may also utter a guttural
grurr - when on the ground or in
flight. The previous note is given
most frequently during flight & usually
as the ♀ is circling around the observer.
In one case - the ♀ came flying directly
at me giving the turnstone call (where
I have called chel-claim call - although
I'm not sure if it is described from
the check - if it is just a disturbance
state of the ♀ when she has checked - probably
both). - her check was seen sev. min
later - this was fairly common - to all
of a sudden have a bird appear from
nowhere, giving this call. The check
could not be found in most
cases but undoubtedly they were
nearby. Those ♀ giving this call -
the plots were so marked on the
census sheets. No ♀♀ - where were
known to be sitting on eggs gave the
call.

→

RTH
1963

C. melanotos

53.

17 July Barrow, Alaska

For new nests - #41 - 90' west / plat - just
south of 2.4 - with 4 eggs + ♀ - in -
moss - grass mound - 10% cover of
Carex

#42 - 8' from 1.4 - 4 eggs + inc. ♀ -
in bottom of trough - surrounded by
Carex - given less than 5% cover.
Sedge was the only material
lining the cup.

#31 - hatched during the last 4 days -
but the remainder were still being
incubated - They must have been
laid in late June - early July.

One ground aggressive act between 2
♂ noted near 4.2 - tail up posture - in
part of 1 ♀ who then chased the other off -
& she returned to the area / he back
(chase was an erratic flight - 5' above ground -
with chaser given ♀ call note).

One ♀ with young - west of 5.4 - nest site unk.?

Nest #15 - 1 egg with hole poked in side - 4" from
cup + 1 mass of yolk material in edge of cup -
looked like jaeger probably took care of the
nest.

Nest #29 - one cold egg - present on the 13th -
had an embryo 4-5 days old - but it had not
developed further -

RTT
1963

C. melanotos

56.

17 July Barrow, Alaska

In distraction display. He & sometimes moves her wings rapidly - produce a whirring noise - which probably is meant to draw attention & keep away from the nest site. In ground distr display - The bird is in a posture where the body is horizontal with the ground - the back feathers ruffled - wings droop to side - flutters up & down & slightly in & out & the tail - not held out to the side - but flicked rapidly in that direction - The head is put forward & the sheath of the bill is protruded.



18 July

Found dead carcass (bones & some feathers) on tundra north of beach ridge & east of AACs - still some red meat left - but most had been eaten off - probably by a jaeger. The bird was large - probably a ♂.

Four ♂♂ with group / redbird - east of beach ridge. Sev. (incl. W. ♂) feeding in central marsh & along beach ridge plot. The one nest on the ridge was still being incubated. One flock of 3 ♂♂ seen.

Holmes, R.
1963

C. melanotos

57

18 July Barrow, Alaska

near the census plot.

In afternoon - 2♂♂ near insect pond - feeding in wet marsh, areas - but pecking, not probing. Along Voth Creek - sev. ♀♀ were seen - some appeared to have nests & others were unattached. At nest #39 - there were no eggs - I think this nest was taken by predator - since last time, 1 egg was but 1 hr. now by 6" & now they are all gone. The ♀ may have directed them to - at the time of the ~~storm~~ freeze several days ago - but this seems unlikely (even then - the eggs had to disappear some way - so jaegers may have been involved).

One brood of 3 downy - 2 day old young banded - 20 yds south of Voth Creek.

Another brood of 3 - (30-40 gms) young was caught & banded in Voth's Slough near the enclosure. In this case when I started to catch the chicks - the ♀ did a distraction display & gave the chick-alarm call. At the same time, a flock of 6 ♀♀ arrived & all began giving distraction displays - the entire sequence - including flutter, erect back feathers, etc - Recall - chick call & all - So at one time - there were 7 ♀♀ - all

RTH
1963

58.

E. melanotos

18 July Barrow, Alaska

flying around excitedly & giving various forms of the distraction display. The ♀ with the brood gave the strongest display & stayed in the closest - it was more persistent. The others must be birds who have lost their brood but still have the motivation to perform such acts. (One of them ♀♀ was collected). Only 1 case of ♂-♂ interaction was noted in this hen party - that was when the 8-egg first arrived - the ♀ with the brood flew 6' landed near me & then displaying head & ran after it for about 2' - before it returned to display to me. ~~Then~~ The group dispersed - except the ♀ with the brood - when I started shooting.

19 July Nest 443 - south side of gull line ridge - on slope - but almost to the wet marsh - surrounded by Eriophorum vaginatum & Poa - given - 30% cover - ♀ was present - 8 eggs - N 440 still intact.

Several groups of ♂♂ - usually 2-4 in size - were seen between beach ridge & gull line ridge & in both flouze - they were mostly feeding in upland polygons - however a few individuals were in wet marshes.

Holmes, R.
1963

E. melanotos

59.

19 July Barrow, Alaska

A group / 4 ♂ + 2 ♀ seen with 6 gold
plover west / with Slog h.

Several broods encountered between
beard garden ridge - 3 had 1-3 day
old chick (4 m egg case), & 2 had
partly feathered chick - probably
well old.

20 July ^{FOUR} broods encountered in Footprint Lake -
1/3 week-old chicks, 1 of 1 week old
chick, ^{1 of 1 week old chick} & 1 of 2 week-old chicks (all of them
were in the 25-35 gram class & had
about half their juvenile plumage). All
were banded. - all were accompanied
by an adult ♀.

On Ikroavik census plot. The following
nests were checked

N-33, 34, 30 seen again - no sign of adults - at
N # 37. The chicks were gone but the ♀ was
present & excited

N # 35 & 41 had the first egg pipping. N #
36 had 3 young (+ the 1 abnormally small egg.
+ N # 26 had 3 young & 1 egg which was
just pipping.

The remainder / the rest were in fact 2
at most. A ♀ was present; however at
Sv. - no ♀ was observed.

RTT
1963

C. melanotos

60.

20 July Barrow, Alaska

Two broods (only 1 chick in each found) were located where nests had not previously been located. - one near 20.0 + 1 near 21.0 - both areas where ♀♀ have been observed earlier. The chicks found were banded; they were less than 2 days old.

Flocks were still present today - but small groups of males or of ♀♀ & mixed flocks - the #1's are on the census sheet. The note of the ♂ can be described as a rasping scratch - given when flushed or when taking flight. ♂♂, in general, were present in low numbers.

New nests in plot:

#44 - near 11.3 - 3 eggs + inc ♀ - in Eriophorum - moss mound - with 70% cover

#45 - near 24.2 - 4 eggs + ♀ - grass mound - 10% cover (Poa)

#46 - near 23.2 - 4 ♂ - ♀ - Salix & Carex - gives 50% cover - mossy substrate - cups lined with dead grass blades & Salix leaves.

Many nests still remain - yet to hatch. - Apparently were laid in early July - No flying chicks yet - some ♀♀ are flocking near to leave.

Holmes, R.
1963

C. melanotos

61

21 July Barrow, Alaska

Several groups of both ♂♂ + ♀♀ (3-12 birds) seen along beach ridge + b.r. census plots. Very few were seen in the marsh - where in past years they have been quite common. Nest # 28 on the plot had hatched in the last 2 days.

22 July Nest #40 + 43 - empty. ♀ present & disk displaying from #43 - so they have hatched in the last 2 days. N #27 - also empty - hatched in last 3 days.

Several ♀♀ with chicks seen in area south of Woldschlog. ♂♂ acted as if they still were on eggs - but no new nests were located.

Small flocks of ♀♀ were noted in the same area + as well as scattered individuals ♂♂, many of which are in the terminal stage of body molt.

One flying immature collected at the south end of central marsh.

23 July Very few flocks today - 3 seen on Ikroavik plot + these were dominated by ♀♀. Sev. flocks of ♀♀ were noted north of Ikroavik.

Nests 42, 46 had hatched in the last 2 days + Nest #26 had 3 young + 1 egg. - The ♀ was present + broody. In excitement, she would give a di-di-di-di-di - either followed or preceded by the ♂'s well note. Occasionally she would give the turnstone like note described above.

Holmes, R.
1963

62.

C. melanotos

23 July Barrow, Alaska

The other nests were intact. - 1 ♀ given
The chick call was near 0.3 + 23 - but
her nest couldn't be located. She &
others are noted on the census sheet.

Frequently during the trip down &
back - single ♀♀ were flushed from
the grass - many of them presumably
had young. - or maybe still eggs.

24 July One brood where 2 chicks were seen &
one was taken was noted in the area
south of worksite flight.

Several other ♀♀ (-single) were
also present & probably had chicks.
No flocks today - several single ♂♂
were seen in the upland country.

25 July Two new nests on north 40 - of Shrover plot -
1 nest #47 9.3 with 4 eggs - in large moss, polygon-
um cover provided < 5% cover. Grass blades &
bushes lining the cup.

#48 - nest 10.4 - 3 eggs - ♀ - large moss-covered
polygonum - cover provided 10% cover - Cup
lined with willow leaves + ^{dry} grass blades. -

#45, 37, & 38 were intact & ♀♀ were
present - one had the first egg starting
to pip. #16 - was empty - must
have hatched yesterday.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry must be supported by a valid receipt or invoice. The second part outlines the procedures for handling discrepancies between the books and the actual cash on hand. It states that any variance must be investigated immediately and reported to the management. The third part describes the process for reconciling the bank statements with the company's records. It notes that this should be done monthly to ensure that the company's financial position is always up-to-date. The final part of the document provides a summary of the key points and reiterates the importance of strict adherence to these procedures.

Appendix A: Sample Receipt Form

This appendix provides a sample receipt form that can be used for all transactions. The form includes fields for the date, time, and location of the transaction, as well as the names of the parties involved. It also has a section for describing the goods or services provided and the amount paid. The form is designed to be simple and easy to fill out, ensuring that all necessary information is captured. Below the form, there is a list of instructions for its use, including how to obtain a receipt and how to handle it if it is lost. The document concludes with a statement of approval from the management, confirming that these procedures are to be followed strictly.

Holmes, R.
1963

C. melanotos

63

25 July Barrow, Alaska

Several flocks of ♂♂ + ♀♀ + some mixed with Red Phalaropes - see census sheets. The number / brood is being reduced by emigration - ♂♂ are very scarce now & it seems like the ♀♀ are also departing.

Four flying immatures seen in footprint Lake.

In afternoon - a flock / 5 ♀♀ seen near AACs - one ♀ with chicks (telling by her voice) on gasoline ridge + 1 ♀ with 2 chicks near North meadow lake. The latter two ♀♀ + the 2 chicks were collected. No others were seen in 2 1/2 hours travel.

26 July Most ♂♂ have apparently departed & probably many ♀♀ have also started to move. No large flocks were seen today but occasional singles - like ♂ or ♀ - were flushed from tall grass. 1 group / 3 ♂♂, 1 / 3 ♀, + 1 / 4 ♀, 3 ♂ (3 Ad. RB) were noted in 3 1/2 hour travel & collected. Near all were in well drained upland & were still feeding on adult insects.

One brood of 4 - 2-3 day old chicks + ♀ was found near lake margin east of Intake flats - 2 were banded, 2 collected. 1 brood of, not yet flying chicks (+ ♀) were collected along the south of North meadow lake. One other brood

Holmes, R.
1963

C. melanotos

64.

26 July Barrow, Alaska

of 2 non-flyer chicks collected at the south end of central marsh. For the amount of time + the area travelled - relatively few groups / chicks were observed + on this basis they seem rather scarce, but yet they are caught relatively frequently in the traps.

Only 1 ♀ seen between Britton's Area + the insect plots.

28 July Two flying immatures seen in lower Footprint Lake. A flock of 6 ♀ PS, 3 RD + 2 GO - were feeding along the west side of the lake in relatively well drained habitat. No flocks were seen on the Ikroavik census plot - only single ♀♀ at nest - marked - census sheets.

Nest # 44 & 47 were still intact - but the latter one contained cold + wet eggs - so it may be lost (as I was present there). At nest # 32 which three days ago had an egg starting to cool now contained 3 young + 1 egg with no sign of pipping.

29 July None seen in the Voth area - insect area.

In afternoon, a ♀ with 1 chick located 200 yds west of Brant Point in wet marshy ground. No other chicks were present. No other birds of this species seen in afternoon's travel.

Holmes, R.
1963

65.

C. melanotos

29 July Barrow, Alaska

It appears that many of the songspers have left & perhaps that many of the chicks have not survived - since very few are seen - as compared to what would be expected with the nesting density which was present this year.

4 Aug. 1 ♀ + 2 downy chicks encountered on grassy slope - North 1 nest plot (♀ + 1 J. coll.). 1 Ad ♂ seen feeding near Pond A. No other seen - tracks through lake area - not flushed & try via Britton's Area.

5 Aug. 2 ♀ - each with 1 downy juv. chick collected south of Wohllichlog. - no other chicks were present in either situation - One was checked thoroughly. Only 2 other ♀s were seen today & these were at So. C.M. + ~~So~~ ^{near} may have had ~~a~~ broods - but ~~they~~ ^{they} were not found. 1 ♂ found with 3 Imm RP & 1 ♂ was seen by itself near the Fertile Plots

2 ♀ + 2 J

2 ♀

2 sep. Imm.

In afternoon - 2 immatures seen in gravel pond area - Britton's area - 1 collected. In the densets / PS - Aug 5 - Apr #1 young seen quite low - maybe poor survival - some have left.

Holmes
1963

C. melanotos

66.

6 Aug Barrow, Alaska

1 Imm seen in upland tundra, north of
Footprint Lake, 3 Imm flew over
census plot. No others seen today
- I saw 10 or 11 for Ithoravik.

Nest #47 - had 2 dead chicks (hatching
size) + 1 egg which had pipped but had not
hatched. Since there had been 4 eggs - perhaps
1 chick had hatched early & the ♀ left with it
(all the egg shells of hatched egg were all gone -
it had been carried away by adult) -
perhaps rain & cold got to the chick
while the parent was off feeding. ??

At nest #44 - There were 3 eggs - all
cold - The embryos were within 3-5 days of
hatching. Perhaps the ♀ was predated &
maybe she stayed away from the nest for long
during feeding & the embryos died - !! -

7 Aug

10-12 ♀♀ - in loose flock along north
margin of central marsh. Also several
immatures in the same area. 1 ♀ + non-
flying chick were collected south of the
magnetic station.

8 Aug.

Camp - B.R. - Gasline Ridge - no shorebirds seen
So Gasline → First plots - 2 IPS, 3 lone IPS,
3 IPS. On return trip 5. actives
seen & small groups - all of them
identified were ♀ Imm.

Holmes,
1963

C. melanotos

67.

8 Aug Barrow, Alaska

Other lone individuals^{2 imm} seen near the meadow lakes in afternoon.

9 Aug None in C.M., but flock of 8 imm feeding in upland habitat on bevel ridge - These were wary & not collected. 1 imm imm seen in N 30° - 50° N.S. Salt Lagoon area.

In Voth Area - 3 lone immatures were seen - 1 collected. Two immatures were with a flock of redpolls at one gravel ponds - Britton's Area.

10 Aug 3 Immatures PS - seen in marshy area at south end of Central marsh. No other seen - traces seen in area (to first plot (bale)). No adults seen.

12 Aug 2 traces to Oolupit Slope & return - only 4 immatures were seen (2, 1, 1). No adults seen.

13 Aug - Trip to Gasline ddy - Voth Area - Insect plot & Britton's Area - saw 11 (1, 7, 2, 1) - all immatures - all in polygynous clumps - where there were wet troughs & small ponds.

For the production of young this year - there are very few around now - although there has been a good showing or they have left early.

Holmes
1963

C. melanotos

68.

15 Aug BARROW, ALASKA

None seen north / wobblesly slough - but in
the polygonal country south the slough -
3 I, 3 I, 1 ♀ were seen. In the south-west
part of CM - a flock of 8 I & a flock of 7
near meadows lakes. Most feeding
was in wet upland bogland - (very dry
in wet anyway - all the depression
are full of water.

16 Aug 4 Immatures seen between NM Lake & So. pasture.
1 was still partly downy - but was flying.
Feeding was in pond area - Caux marshes.

17 Aug Several immatures seen & collected by Maker's
assistants (Muebeant & Tenazo) on north slope of
beach ridge.

18 Aug None seen in tip & south guideline ridge &
hole - via meadows lakes.

19 Aug None seen in north lake - most plot area
20 Aug in morning hours - only 1 (an immature)
seen. It was with a
group of dowitchers, young redpolls &
an imm. Western Scp. - collected.
- in wet inland ground.

21 Aug Stevens collected 5 immatures from
a flock of about 12 - near APES.

22 Aug In afternoon - only 2 imm were
seen - 1 was seen at north end
of CM - feeding with dowitchers

H. Innes, R.
1963

C. melanotos

69

22 Aug Barrow, Alaska

In the evening - sev (6-8) Imm were seen
near AAPs + near the marsh
area between south meadow lot
+ the fertilized plots - probably
18 seen in all. Feeding was in the
wet marsh, especially in the
black mud of weasel tracks.

23 Aug 6-8 seen - near camp meadow. - Immature
~~25~~ r

24 Aug 2 Imm in Britton's Grand pads - no other
seen on tundra - in no wet - wet plots.

25 Aug 1 Im, + 2 Im - seen between camp + oobyik
sh - via meadow lake - most are now gone

Holmes, R
1964

C. melanotos

4 June Barrow, Alaska

1 ♂, 1 ♀ feeding w/ 1 KB near HACS, 1 flut / 4 ♂♂, seen
indiv. ♂♂ near HACS. No displays seen; males
did not look well developed in the throat-
region - is not saggy - or particularly
darkly-streaked. Small (1-5) groups seen
along Elson bluffs - 2 displaying ♂♂ seen
on Pitelke's Plat, 1 along Elson bluff near Shipik.

5 June Sev. scattered under ♂♂ along W. bluff.
Small area + dense ridge - but - gone
not very common. Only 1 aerial display
was observed.

One ♂ at NE corner / Pitelke's Plat - displaying -
+ chasing one less 'well-developed' ♂♂. Flut /
3 ♂♂ along Elson bluff, 1 other display.

6 June 1 ♂ in No. B.R., 2 ♂♂ landed on ridge south of
US CGS station. Flut / 1 ♂♂ (?) in central marsh.
No display seen or heard. None in HACS area.
Several time indiv. between Wohl + Bookill
along Elson Lagoon - 1 group / 4 ♂♂, 1 group / 1 ♀, 1 ♀,
+ 1 W.R. Only 1 aerial display seen.

7 June Flut / 16 (mostly male) on N.E. corner /
C.V. - flew onto BR near magnetic station
Several small groups (2-4) seen a ridge - +
chase by the 1 settled ♂ near O.C. - 1 Pitelke's Plat
had increased in frequency. Several ~~to~~ additional
displays also seen. Only 1 identifiable (seems
feeding w/ 1 - over new settled ♂).

RTH
1964

2

C. melanotos

7 June Barrow, Alaska

1 ♂ male - north beach ridge between
barrel + gasline + screen unahtoches +
less - well developed bird - 1 ♀ seen -
sev. display. Numbers seen + are
increasing.

8 June

1 ♂ harassing a wh-r. - see C. fuscescens
At least 2 settled ♂♂ on monument / Pitelki's
plot - considerable chasing - incl. use of the
jabber.

9 June

1 display seen - N.B.R. - North in 2 hrs obs.
Tried to use the stuffed bird to attract
the ♂ on B.R. - at NE corner of Pitelki's Plot
but after a brief survey of the model
from 30' away, the bird paid no further
interest. Another indiv. on the grassy
slopes of Worblodlog Slough came in over +
moved to within 5' of the decoy - but then
moved off. Either the birds are not as
excited as they were last (i.e. perhaps last
year with the dense pop - there was greater
agitation + aggression between ♂♂ -
that it has not fully developed yet.

10 June

- 1 chased by WH. See that species - 1 ♀
being chased by 2 ♂♂. Sev. display west of
gasline near AACs; 3 ♂♂ chasing on gravel
ridge - two were in combat a ground with
wing flapping + the birds flapping around on the ground + air.

RTH
1964

C. melanotos

3.

11 June Barrow, Alaska

Two males on P. Lika S Plot, + 1 to the north.
The one on the north end - chased a bairdii
bird - a minute apart. - Action was
primarily a supplanting one - The PS flying
landing near the BS who immediately took flight,
followed closely by the PS for 30 or 40' -
The PS then swooped off & gave a hooting
call.

12 June A ♂ supplanted a WR-bird - by landing near it -
The WR flying a few feet, landing, the PS following,
finally WR flew off.

13 June 2 ♂ - 1 ♀ on NBR. east of gasoline - 2 ♂ - following
♀, flying & he in attempt to copulate -
but neither ♂ succeeded since they interfered with
each other & each time they approached the ♀, she
flew off (may have had a nest - appeared broody).
The two males battled for 10 min + - flying
side by side in the air - giving partial hooting
calls - but usually the gurgle - landing on
the ground - one assumed an upright sleeked
posture - the other a hunched, crouched
posture with head forward close to the
ground. - Then the lone bird would
dart at the upright one - who would
veer away, but then turn & run
toward the other - who took flight &
a chase ensued. Several of them ground.

Holmes, R.
1964

C. melanotos

4

13 June Barrow Alaska

encounters observed - all having similar posture & action - all - I do not know whether the same ♂ was always the upstart one & vice versa.

Flock of 6 - I believe ♂♂ - moving east on north beach ridge - been chased by resident ♂ PS + WR.

14 June Photographed ♂ display, ♂-♂ encounter, & ♂-♀ ground courtship near nest on P. telles' plot. The two ♂♂ were making frequent contacts - flying side by side in air - or chasing & landing on ground where fighting occurred (forward aggressive with tail down & fanned, wings folded normally - head forward & forward, back feathers ruffled - dart at other male - who usually was in upright "alert" posture - or the two sparred heads being moving in & out (li forward & back) & to each side - back & forth - giving a swaying motion & then an occasional strike or dart toward the opponent].

Sev. chases seen on beach ridge near guideline - some sort as above.

- ♀ PS [from this nest which had 3 eggs today] moved duck & crabs in grass where PJ or PPS flew by - in the case of the last - the included single ♂♂ in hovering display & chasing ♂♂.

RTH
1964

C. melanotos

5.

15 June Barrow, Alaska

Several ♀ chases noted along north beach ridge:
14:30♂♂, 19, 20♂♂, 14:40♂♂. - These may
have been the same 4 - but probably at least 2
were involved.

One ♂-♂ encounter observed on beach ridge +
photographed. Two birds landed - one would
lower head, ruffle body feathers + dash at
other, who would run a few feet or
fly several feet - + be followed by the aggressor.
Occasionally they would both be in
upright posture. eye - and other for the
side in lateral view - head move
back + forth to the side. sometimes they
lowering + the + dash at the other bird.
The two sometimes followed by a fluttering
together into the air. the + part, flying
separately, one behind the other. in
both would fly side by side - each
giving a abbreviated version of the
beat. - see movie.

♂-♂ encounter, chase, + battle
seen frequently in uplands south of garbage
ridge - most seen started when a ♀ was
discovered - where a ♂ began a ground display
to the ♀ + was seen by another ♂.

Pectorals seen moderately abundant one
year.

Holmes, R. T.
1964

C. melanotos

6.

16 June Barrow, Alaska

Reproductive activity is increasing. ♂♂ are settled densely (~2-3 birds/100 - almost equal to last year's pop ^{at least in local areas} (i.e. North end / Pitelka's plot). Chasing of ♂ by ♂ is seen very frequently + also the chase of a ♀ by 1 to as many as 4 ♂♂. Several ground courtship sequences seen + photographed today.

At least 2 flocks - 6, + 8 birds - seen on North end ridge + central waste - looked like mostly ♂♂. - more arrivals, probably.

17 June Several small flocks (3-6) of ♂♂ - some (which appear to be newly arrived + not well developed chest area - i.e. probably young ♂♂ arriving (2 seen sitting together - later being chased by resident ♂). 1 ♂ gave ground courtship to ♂ white-rump - not full display but tail cocked + several guttural H₂O-ke-ke. Then went off to chase (♀ - to which he had been displaying on the ground earlier + also had flown low over her + hooted). - So he may have gotten mixed up or confused after?

Several broods of 4 - probably laying or recently completed clutch.

18 June Several small flocks / 4-7 indiv. seen along N.B.R. - settled ♂ - busy chasing the groups (seemed to be composed mostly of 1st yr. males - i.e. not well dev. immatures).

ATIT
1964

C. melanotos

7

18 June Barrow, Alaska

Also, some of the hooting today was high pitched & not as "hollow" as some - indicate there you are settling & doing some displaying.

19 June Flock / 11 ♂♂. all eggs young - N.B.R. - bounding a ♀ which I had flushed from a nest. Another group / 4 ♂♂, + 1 ♀ seen later. ♀ + nest 1 egg. in one south 1000 Area - eggs collected for weights.

20 June Flocks / 3, 4, 3 - N.B.R. ♂♂ still dense - but chasing is becoming less frequent. ♂♂ chasing on beach ridge. Several ♀♀ - in distraction display - but nests were not located.

21 June Flock / 4 ♂♂ - including 2 well-developed "mature" ones along north beach ridge. Also, 1 male chasing ♀ at ~200' "elevation" & gave 6-8 hoots while at the altitude during the chase.

22 June Flocking increasing - over 17, 8, 6, 6, 13 - along No. 2 R. - plus several young or scattered along the ridge. Flock 1 25+ on Pitelka's Plot.

23 June - ♂ gave ground courtship to ♀ WR - followed by several see with tail up - given ke-rae note. ♂ activity increased - good - much chasing & displaying.

RTH
1964

C. melanotos

8

24 June

Barrow, Alaska

♂ display still seen frequently + ♂♂ are still harassing ♀♀ who are flushed from the nest. In one case today - the ♂ began following the ♀ with his tail strongly cocked, wings slightly held out from the body + perhaps partially drooped + followed behind the ♀ (who gave several rear-end-ups to him - but these were not strong) calling kō-va, kō-va - - - After several he began giving a hissing note emitted with bill wide open + sagging throat highly pulsating.

25 June

Flork 150-60 had a Footprint lab - small group of 8 in census plot. Other scattered males, displaying occasionally but not frequently. 3 ground - ♂-♂ encounter with scolding postures seen + 1 ♂ harassing ♀ + crying in the ke-me-ah note was recorded.

26 June

Flork 118 on N.B.R. - small group of 5-6 - more along B.R. + Garden Ridge. Several ♂♂ are still settled, displaying (although less frequently) + chasing - but many appear to have left already.

Nest with 4 eggs in beach ridge - 70 yds east of microwave.

Flork 18 in central marsh, group of 14 east of P. helix + P. helix.

RTH
1964

C. melanotos

9

27 June Barrow, Alaska

3 hoot displays heard between 0500-1100 - when coals cover between over a large distance. A few other heard during the day, but display is down. From June 1 3-8 ♂♂ moving in & idly in Central marsh.

28 June

Activity has dropped off to proportionally zero. Nearly all either ♂♂ have been left or are not displaying. Only 1 hooting display seen heard during the entire day & area while hoot continued ♂♂ 2 days ago (Gudine R. for example - when 3 ♂♂ were busy chasing & display - at the 26th) were gone today. Also the amount of chasing has declined. ∴ ♂♂ are departing earlier than in the years.

30 June

Few scattered ♂♂. singles or 2's & 3's - 29% in nests on Pitelka's plot. Chasing - ground aggression with tail up - head low - pre and other - attack → aerial chase. Nest on br. micromit still intact.

1 July

1 hoot display - very little activity - only a few ♂♂ seen - most have departed.

2 July

- One flock of 5 chasing on gasline ridge, 2 single birds in b.v. - 4 active on nest on micromit. Activity low - many have departed.

8899 B. 42

